

Contracts/Bids PW Finance Checklist

Date: 5/11/2023
Reviewed By: Shannon Barrett

- X **Applicable CC-Authorized CAM printed and attached?**
- X **Identify and Verify City Contract # is included on the Contract Front Page**
- X **Verify contract unit prices on the bid tab.**
- X **Verify all calculations and totals on the bid tab.**
- (Make sure the bid allowance is included in the total cost)**
- N/A **What does the contract dictate about reimbursables**
- \$100 HR **What does the contract dictate about overtime pay rates**
- X **Identify and confirm funding with Project Manager and**
FAMIS (6450) or ETS (Monthly Project Report)
- Is the scope of work a capital project expense? Or operational?**
- Capital projects must meet all 3 of the following criteria:
- 1) \$50k value, 2) new or replacement tangible asset, and 3) a useful life of 10 or more years? Or is it operational; repairs and maintenance? Repairing existing system or asset to maintain the original useful life?
- X **Initial routing form and forward to Financial Administrator**
(Shannon) for signature.
- Forward to Administrative Assistant (Kian) for continued authorization routing.**

| Project | Chart of Account... | Finance Dimension 01 | Finance Dimension 01 Description | Project Description | Budget Functiona... | Actual Functional Amount | Commitment Function... | Encumbrance Fun... | Balance |
|---------|---------------------|----------------------|----------------------------------|---------------------|---------------------|--------------------------|------------------------|--------------------|----------------|
| P12708 | CAPITAL | 468 | AIRPORT FUND | RUNWAY 9 RUN-UP... | 574,621 | 20,483.46 | 0 | 0 | 554,137.54 |
| P12708A | CAPITAL | 468 | AIRPORT FUND | RW 9 RUN-UP REL... | 251,830 | | | | 251,830 |
| P12708B | CAPITAL | 468 | AIRPORT FUND | RW9 RUN UP & S E... | 4,048,500 | | | | 4,048,500 |
| | | | | | Σ 4,874,951 | Σ 20,483.46 | Σ 0 | Σ 0 | Σ 4,854,467... |



**CITY OF FORT LAUDERDALE
City Commission Agenda Memo
REGULAR MEETING**

#23-0157

TO: Honorable Mayor & Members of the
Fort Lauderdale City Commission

FROM: Greg Chavarria, City Manager

DATE: February 21, 2023

TITLE: Motion Approving Agreement for the Fort Lauderdale Executive Airport
Runway 9 Run-up Area Relocation and South End Taxiway Intersection
Improvements - Weekley Asphalt Paving, Inc. - \$3,979,833.25 -
(Commission District - 1)

Recommendation

Staff recommends the City Commission approve an agreement, in substantially the form attached, with Weekley Asphalt Paving, Inc., (Weekley) for the Fort Lauderdale Executive Airport Runway 9 Run-up Area Relocation and South End Taxiway Intersection Improvements in the amount of \$3,979,833.25, which includes an \$18,500 allowance for sign panels for existing airfield signs and to update the existing airfield lighting control and monitoring system.

Background

This project is for the rehabilitation and realignment of Taxiway Echo and relocation of Runway 9 Run-up area. Taxiway Echo pavement is in fair condition with a Pavement Condition Index (PCI) of 64, which indicates a need for rehabilitation to enhance safety at the airport. In addition, Taxiway Echo will be shifted and realigned to meet Federal Aviation Administration (FAA) design standards and to eliminate a nonstandard and confusing taxiway intersection.

The realignment of the taxiway requires relocation of an existing run-up pad and a minor geometric design to Taxiway Juliet to comply with current FAA design standards, which are both logically necessary to accomplish the rehabilitation of Taxiway Echo. Additionally, the Taxiway Echo edge lighting system has outlived its useful life and will need to be reconstructed to enhance airfield safety.

The FAA has agreed to provide grant funding of \$4,048,500 for 90% reimbursement of eligible construction costs for this project. Florida Department of Transportation's Public Transportation Grant Agreement grant will cover 5% of the construction cost and the City will have to match at least 5% of the construction cost.

On May 10, 2022, the Procurement Services Division issued Invitation to Bid No. 12679-623. The City received six (6) bids in response to the solicitation, which opened on June 22, 2022. The bid submitted by Weekley met the solicitation requirements and deemed the low, responsive, and responsible bidder. Weekley has successfully completed the following projects that are similar in scope and scale of the proposed projects; Dual Taxilane Access to Taxiway Lima at North Perry Airport, Taxiway Delta Phase II Reconstruction at Pompano Beach Airpark, and Runway 5-23 Improvements at Boca Raton Executive Airport.

The Engineer of Record professional services were acquired through a Consultants' Competitive Negotiation Act continuing contract, which would require the estimated construction cost of this project to not exceed \$4 million dollars. In keeping with this requirement, City staff reduced the estimated quantities of known surplus from all the bidders for the following Bid Line Items:

ITEM #8 - P-101-5.1 Full Depth Asphalt Pavement Removal:
Reduced from 9,500 Square Yards (SY) to 8,500 SY

ITEM #21 - P-211-5.1 Lime Rock Base Course (9" Thick):
Reduced from 11,800 SY to 11,200 SY

ITEM# 24 - P-401-8.1 Hot Mixed Asphalt Pavement (Surface):
Reduced from 4,500 Tons to 4,355 Tons

The reduction of these quantities did not impact the bid award nor any bidders' original bid standing.

Disadvantaged Business Enterprise Preference is not applicable to this solicitation.

Resource Impact

There will be a current fiscal impact to the City in the amount of \$3,979,833.25 for this agreement, and \$60,000 for in-house project management fees for a total cost of \$4,039,833.25. Funds for this contract, in the total amount of \$4,039,833.25 are available in the FY 2023 Community Investment Plan in the account listed below.

| <i>Funds available as of January 10, 2023</i> | | | | | |
|--|--|----------------------------------|-----------------------------------|--------------------------------------|---------------|
| ACCOUNT NUMBER | COST CENTER NAME (Program) | CHARACTER/ ACCOUNT NAME | AMENDED BUDGET (Character) | AVAILABLE BALANCE (Character) | AMOUNT |
| 10-468-9300-542-60-6501-P12708 | Runway 9 Run-up Area and South End Taxiway | Capital Outlay/ Engineering Fees | \$574,621 | \$559,946 | \$60,000.00 |
| 10-468-9300-542-60-6599-P12708 | Runway 9 Run-up Area and South End Taxiway | Capital Outlay/ Construction | \$574,621 | \$559,946 | \$198,993.25 |
| 10-468-9300-542-60-6599-P12708A | Runway 9 Run-up Area and South End Taxiway | Capital Outlay/ Construction | \$251,830 | \$251,830 | \$198,991.00 |

| | | | | | |
|---------------------------------|--|------------------------------|-------------|-----------------------|-----------------------|
| 10-468-9300-542-60-6599-P12708B | Runway 9 Run-up Area and South End Taxiway | Capital Outlay/ Construction | \$4,048,500 | \$4,048,500 | \$3,581,849.00 |
| | | | | TOTAL AMOUNT ► | \$4,039,833.25 |

Strategic Connections

This item is a Top Commission Priority, advancing the *Infrastructure and Resilience Initiative*.

This item supports the *Press Play Fort Lauderdale 2024 Strategic Plan*, specifically advancing:

- The Business Development Focus Area
- Goal 5: Build an attractive global and local economic community marketplace.
- Objective: Provide best-in-class regional general aviation airport amenities and services

This item supports the *Advance Fort Lauderdale 2040 Comprehensive Plan* specifically advancing:

- The Infrastructure Focus Area
- The Transportation and Mobility Network
- Goal 3: Ensure the cohesive transportation network, among local, regional, and state regulatory institutions.

This item advances the *Fast-Forward Fort Lauderdale Vision Plan 2035: We are Prosperous*.

Attachments

Exhibit 1 - Solicitation
Exhibit 2 - Bid Tabulation
Exhibit 3 - Agreement

Prepared by: Khant Myat, Project Manager II, Public Works - Airport
Maureen Lewis, Senior Procurement Specialist, Finance
Friseta Davis, Senior Administrative Assistant, Finance

Department Director: Alan Dodd, Public Works
Linda Short, Finance

CITY OF FORT LAUDERDALE

CONTRACT

**FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY 9 RUN-UP AREA
RELOCATION AND SOUTH END TAXIWAY INTERSECTION IMPROVEMENTS
(12679-623)**

DESCRIPTION

Weekley Asphalt Paving, Inc.

CONTRACTOR

\$3,979,833.25

AMOUNT

February 21, 2023

COMMISSION APPROVAL DATE

CITY OF FORT LAUDERDALE
CONSTRUCTION AGREEMENT

THIS Agreement made and entered into this 21st day of February, 2023, by and between the City of Fort Lauderdale, a Florida municipal corporation (City) and Weekley Asphalt Paving, Inc., a Florida Corporation (Contractor), ("Party" or collectively "Parties");

WHEREAS, the City desires to retain a contractor for the Project as expressed in its Invitation to Bid No., 12679-623, Project Number, 12708, which was opened on June 22, 2022; and,

WHEREAS, the Contractor has expressed its willingness and capability to perform the necessary work to accomplish the Project.

NOW, THEREFORE, the City and the Contractor, in consideration of the mutual covenants and conditions contained herein and for other good and valuable consideration, the receipt and sufficiency is hereby acknowledged, agree as follows:

ARTICLE 1 – DEFINITIONS

Whenever used in this Agreement or in other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural forms:

- 1.1 Agreement – This written Agreement between the City and the Contractor covering the work to be performed including other Contract Documents that are attached to or incorporated in the Agreement.
- 1.2 Application for Payment – The form accepted by the City which is to be used by the Contractor in requesting progress or final payment and which is to include such supporting documentation as is required by the Contract Documents.
- 1.3 Approve – The word approve is defined to mean review of the material, equipment or methods for general compliance with design concepts and with the information given in the Contract Documents. It does not imply a responsibility on the part of the City to verify in every detail conformance with plans and specifications.
- 1.4 Bid – The offer or Bid of the Contractor submitted on the prescribed form setting forth the total prices for the Work to be performed.
- 1.5 Bid Documents – Advertisement for Invitation to Bids, the Instructions to Bidders, the Bid Form (with supplemental affidavits and sample agreements), the Contract Forms, General Conditions, the Supplementary Conditions, the Specifications, and the Plans, which documents all become an integral part of the Contract Documents.
- 1.6 Certificate of Substantial Completion - Certificate provided by the City certifying that all Work, excluding the punch list items, has been completed, inspected, and accepted by the City.

- 1.7 Change Order - A written document ordering a change in the Contract Price or Contract Time or a material change in the Work.
- 1.8 City – The City of Fort Lauderdale, Florida, including but not limited to its employees, agents, officials, representatives, contractors, subcontractors, volunteers, successors and assigns, with whom the Contractor has entered into the Agreement and for whom the Work is to be provided.
- 1.9 Contract Documents – The Contract Documents shall consist of this Agreement, Exhibits to this Agreement, Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance, Notice of Award and Notice to Proceed, General Conditions, Special Conditions, Technical Specifications, Plans/Drawings, Addenda, Bid Form and supplement Affidavits and Agreements, all applicable provisions of State and Federal Law and any modification, including Change Orders or written amendments duly delivered after execution of Agreement, Invitation to Bid, Instructions to Bidders and Bid Bond, Contractor's response to the City's Invitation to Bid, Schedule of Completion, Schedule of Values, all amendments, modifications and supplements, work directive changes issued on or after the Effective Date of the Agreement, as well as any additional documents that are required to be submitted under the Agreement.
- Permits on file with the City and/or those permits to be obtained shall be considered directive in nature and will be considered a part of this Agreement. A copy of all permits shall be given to the City for inclusion in the Contract Documents. Terms of permits shall be met prior to acceptance of the Work and release of the final payment.
- 1.10 Contract Price – The amount established in the bid submittal and award by the City's City Commission, its successors and assigns, as may be amended by Change Order.
- 1.11 Contract Time – The number of calendar days stated in the Agreement for the completion of the Work. The dates on which the work shall be started and shall be completed as stated in the Notice to Proceed.
- 1.12 Contractor – The person, firm, company, or corporation with whom the City has entered into the Agreement, including but not limited to its employees, agents, representatives, contractors, subcontractors, their subcontractors and their other successors and assigns.
- 1.13 Day – A calendar day of twenty-four (24) hours ending at midnight.
- 1.14 Defective – When modifying the word "Work" refers to work that is unsatisfactory, faulty, or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Project Manager's recommendation of final payment.
- 1.15 Effective Date of the Agreement – The effective date of the Agreement shall be the date the City Commission approves the work.
- 1.16 Final Completion Date – The date the Work is completed, including completion of the final punch list, and delivered along with those items specified in the Contract Documents and is accepted by the City.

- 1.17 **Hazardous Materials (HAZMAT)** - Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment defined in Section 101(14) of Comprehensive Environmental Response, Compensation and Liability Act of 1980 and in 40 CFR 300.6. Also defined by 49 CFR 171.8 as a substance or material designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.
- 1.18 **Hazardous Substance** - As defined by Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act; any substance designated pursuant to Section 311(b) (2) (A) of the Clean Water Act; any element, compound, mixture, solution or substance designated pursuant to Section 102 identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act {but not including any waste listed under Section 307[a] of the Clean Water Act}; any hazardous air pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
- 1.19 **Hazardous Waste** - Those solid wastes designated by OSHA in accordance with 40 CFR 261 due to the properties of ignitability, corrosivity, reactivity, or toxicity. Any material that is subject to the Hazardous Waste Manifest requirements of the EPA specified in 40 CFR Part 262.
- 1.20 **Holidays** - Those designated non-work days as established by the City Commission of the City of Fort Lauderdale.
- 1.21 **Inspection** – The term “inspection” and the act of inspecting as used in this Agreement is defined to mean the examination of construction to ensure that it conforms to the design concept expressed in the plans and specifications. This term shall not be construed to mean supervision, superintending and/or overseeing.
- 1.22 **Notice of Award** - The written notice by City to the Contractor stating that upon compliance by the Contractor with the conditions precedent enumerated therein, within the time specified that the City will sign and deliver this Agreement.
- 1.23 **Notice to Proceed** – A written notice to Contractor authorizing the commencement of the activities identified in the notice or as described in the Contract Documents.
- 1.24 **Plans** - The official graphic representations of this Project that are a part of the Contract Documents.
- 1.25 **Premises (otherwise known as Site or Work Site)** – means the land, buildings, facilities, etc. upon which the Work is to be performed.
- 1.26 **Project** – The construction project described in the Contract Documents, including the Work described therein.

- 1.27 Project Manager - The employee of the City, or other designated individual who is herein referred to as the Project Manager, will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the contract Documents in connection with completion of the Work in accordance with this Agreement. The Project Manager, or designee, shall be the authorized agent for the City unless otherwise specified.
- 1.28 Punch List - The City's list of Work yet to be done or be corrected by the Contractor, before the Final Completion date can be determined by the City.
- 1.29 Record Documents - A complete set of all specifications, drawings, addenda, modifications, shop drawings, submittals and samples annotated to show all changes made during the construction process.
- 1.30 Record Drawings or "As-Builts" - A set of drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the Contractor. These documents will be signed and sealed by a Professional Engineer or a Professional Land Surveyor licensed in the State of Florida and employed by the Contractor at no cost to the City.
- 1.31 Substantially Completed Date – A date when the Contractor has requested in writing, stating that the Work is substantially completed and is ready for an inspection and issuance of a final punch list for the Project. If, at the time of inspection, it is determined the project is substantially completed, the City will issue a letter of Substantial Completion along with a punch list of incomplete or deficient items to be completed prior to requesting a Final Completion inspection.
- 1.32 Work – The construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment, and services provided or to be provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a part of the Project.

ARTICLE 2 – SCOPE OF WORK

- 2.1 The Contractor shall complete all work as specified or indicated in the Contract Documents. The Project for which the Work under the Contract Documents may be the whole or only part is generally described as follows:

FXE RUNWAY NO. 9 RUN-UP AREA RELOCATION
AND SOUTH END TAXIWAY INTERSECTION IMPROVEMENTS
ITB 12679-623 PROJECT 12708

- 2.2 All Work for the Project shall be constructed in accordance with the approved plans and Specifications. The Work generally involves:

PROJECT DESCRIPTION

This Project is located at Fort Lauderdale Executive Airport in the City of Fort Lauderdale. The work includes, but is not limited to, relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage. The project also includes the re-alignment of taxiways Echo and Juliet on the southern end of Runway 9.

The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping and sodding, as well as installation of LED edge-lights and guidance signs.

- 2.3 Within ten (10) days of the execution of this Agreement, the Contractor shall submit a Construction Schedule, Schedule of Values and a listing of all personnel employed. The general sequence of the Work shall be submitted by the Contractor and approved by the City before any work commences. The City reserves the right to issue construction directives necessary to facilitate the Work or to minimize any conflict with operations.

ARTICLE 3 – PROJECT MANAGER

- 3.1 The Project Manager is hereby designated by the City as Khant Myat, P.E., whose address is 100 N. Andrews Avenue, 4th Floor, Fort Lauderdale, FL 33301, telephone number: (954) 828-5061, and email address is kmvat@fortlauderdale.gov. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

ARTICLE 4 – CONTRACT DOCUMENTS

The Contract Documents, which comprise the entire Agreement between the City and Contractor, are incorporated herein and attached to this Agreement, and consist of the following:

- 4.1 This Agreement.
- 4.2 Exhibits to this Agreement: (Plans sheets [1] to [74] inclusive).
- 4.3 Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance.
- 4.4 Notice of Award and Notice to Proceed.
- 4.5 General Conditions and Special Conditions.
- 4.6 Technical Specifications.
- 4.7 Plans/Drawings.
- 4.8 Addenda number 1 through 4, inclusive.
- 4.9 Bid Form and supplement Affidavits and Agreements.
- 4.10 All applicable provisions of State and Federal Law.
- 4.11 Invitation to Bid No., 12679-623, Instructions to Bidders, and Bid Bond.

- 4.12 Contractor's response to the City's Invitation to Bid No., 12679-623, dated June 22, 2022.
- 4.13 Schedule of Completion.
- 4.14 All amendments, modifications and supplements, change orders and work directive Changes, issued on or after the Effective Date of the Agreement.
- 4.15 Any additional documents that are required to be submitted under the Agreement.
- 4.16 Permits on file with the City and or those permits to be obtained shall be considered directive in nature and will be considered a part of this Agreement.

In the event of any conflict between the documents or any ambiguity or missing specification or instruction, the following priority is established:

- a. Approved change orders, addenda or amendments.
- b. Specifications and Drawings.
- c. Special Conditions.
- d. General Conditions.
- e. This Agreement dated February 21, 2023, and any attachments.
- f. Invitation to Bid No., 12679-623, and the specifications prepared by the City.
- g. Contractor's response to the City's Invitation to Bid No., 12679-623, dated June 22, 2022.
- h. Schedule of Values.
- i. Schedule of Completion.

If during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to the Project Manager, in writing, within five (5) calendar days, and before proceeding with the Work affected shall obtain a written interpretation or clarification from the City.

Any Work that may reasonably be inferred from the specifications or plans as being required to produce the intended result shall be supplied whether or not it is specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials, or equipment, such works shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or associations, or to the code of any governmental authority whether such reference be specific or implied, shall mean the latest standard specification, manual or code in effect as of the Effective Date of this Agreement, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties

and responsibilities of the City, the Contractor, or any of their agents or employees from those set forth in the Contract Documents.

ARTICLE 5 – CONTRACT TIME

- 5.1 The Contractor recognizes that **TIME IS OF THE ESSENCE**. The Work shall commence within **120** calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within **446** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.
- 5.3 The Work shall be finally completed on the Final Completion Date and ready for final payment in accordance with this Agreement within **476** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.

ARTICLE 6 – CONTRACT PRICE

- 6.1 City shall pay Contractor for performance of the Work in accordance with Article 7, subject to additions and deletions by Change Order, as provided for in this Agreement.
- 6.2 The Parties expressly agree that the Contract Price, which shall not exceed the amount of **\$3,979,833.25**, constitutes the total maximum compensation payable to Contractor for performing the Work, plus any Work done pursuant to a Change Order. The Contract Price is in accordance with the line items unit prices listed in the Bid. Line items are based on a unit price cost multiplied by a defined quantity. Any additional duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change to the Contract Price.
- 6.3 The Contract Price constitutes the compensation payable to Contractor for performing the Work plus any Work done pursuant to a Change Order. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in the Contract price.

ARTICLE 7 – PAYMENT

- 7.1 Contractor shall submit Applications for Payment in accordance with the Contract Documents. Applications for Payment will be processed by City as provided for in the General Conditions.
- 7.2 Progress Payments. City shall make progress payments on account of the Contract Price on the basis of Contractor's monthly Applications for Payment, which shall be submitted by the Contractor between the first (1st) and the tenth (10th) day after the end of each calendar month for which payment is requested. All progress payments will be made on the basis of the progress of the Work completed.
- 7.3 Prior to Final Completion, progress payments will be made in an amount equal to ninety-five percent (95%) of the value of Work completed less in each case the aggregate of payments previously made.

- 7.4 Final Payment. Upon final completion of the Work in accordance with the General Conditions, as may be supplemented, the City shall pay Contractor an amount sufficient to increase total payments to one hundred percent (100%) of the Contract Price. However, not less than five percent (5%) of the Contract Price shall be retained until Record Drawings (as-builts), specifications, addenda, modifications and shop drawings, including all manufacturers' instructional and parts manuals are delivered to and accepted by the City.
- 7.5 City may withhold, in whole or in part, payment to such extent as may be necessary to protect itself from loss on account of:
- 7.5.1 Defective work not remedied.
 - 7.5.2 Claims filed or reasonable evidence indicating probable filing of claims by other parties against Contractor or City because of Contractor's performance.
 - 7.5.3 Failure of Contractor to make payments properly to subcontractors or for material or labor.
 - 7.5.4 Damage to another contractor not remedied.
 - 7.5.5 Liquidated damages and costs incurred by Consultant for extended construction administration, if applicable.
 - 7.5.6 Failure of Contractor to provide any and all documents required by the Contract Documents.

When the above grounds are removed or resolved satisfactory to the Project Manager, payment shall be made in whole or in part.

- 7.6 The City shall make payment to the Contractor in accordance with the Florida Prompt Payment Act, Section 218.70, Florida Statutes (2022), as amended or revised, provided, however, complete and error free pay application is submitted.
- 7.7 The City shall make payment to the Contractor by check.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

In order to induce the City to enter into this Agreement, Contractor makes the following representations upon which the City has relied:

- 8.1 Contractor is qualified in the field of public construction and in particular to perform the Work and services set forth in this Agreement.
- 8.2 Contractor has visited the Work Site, has conducted extensive tests, examinations and investigations and represents and warrants a thorough familiarization with the nature and extent of the Contract Documents, the Work, locality, soil conditions, water table condition, moisture conditions and all year-round local weather and climate conditions (past and present), and examination and investigations conducted by Contractor and the Contractor's experts, has determined that no conditions exist that would in any manner affect the Proposed Price and that the project can be completed for the Proposed Price submitted within the Contract Time as defined in this Agreement.

Furthermore, Contractor warrants and confirms that it is totally familiar with, understands and obligates Contractor to comply with all federal, state and local laws,

ordinances, rules, regulations and all market conditions that affect or may affect the cost and price of materials and labor needed to fulfill all provisions of this Agreement or that in any manner may affect cost, progress or performance of the Work.

8.3 The Contractor has satisfied itself as to the nature and location of the Work under the Contract Documents, the general and local conditions of the Project, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, and roads, the conformation and conditions at the ground based on City provided reports, the type of equipment and facilities needed preliminary to and during the prosecution of the Work and all other matters which can in any way affect the Work or the cost thereof under the Contract Documents.

8.4 The Contractor has also studied on its own, investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Works, and finds and has further determined that no conditions exist that would in any manner affect the Proposed Price and that the Project can be completed for the Proposed Price submitted.

8.5 Contractor has made or caused to be made, examinations, investigations, tests and studies of such reports and related data in addition to those referred to in Paragraphs 8.2, 8.3 and 8.4 above as it deems necessary for the performance of the Work at the Contract Prices, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are, or will be, required by Contractor for such purposes.

8.6 Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

8.7 Contractor has given City written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution by City is acceptable to the Contractor.

8.8 Labor

8.8.1 The Contractor shall provide competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The Contractor shall at all times maintain good discipline and order at the site.

8.8.2 The Contractor shall, at all times, have a competent superintendent, capable of reading and thoroughly understanding the drawings and specifications, as the Contractor's agent on the Work, who shall, as the Contractor's agent, supervise, direct and otherwise conduct the Work.

8.8.3 The Contractor shall designate the superintendent on the job to the City, in writing, immediately after receipt of the Notice to Proceed. The Contractor understands and agrees that the superintendent's physical presence on the job site is indispensable to the successful completion of the Work. If the superintendent is frequently absent from the job site, the Project Manager may

deliver written notice to the Contractor to stop work or terminate the Agreement in accordance with Article 17.

- 8.8.4 Where required and necessary, the contractor shall, at all times, have a certified "competent person" assigned to the job site. The Contractor shall assign personnel to the job site that have successfully completed training programs related to trench safety, confined space work, and maintenance of traffic (MOT). Personnel certified by the International Municipal Signal Associations with Florida Department of Transportation qualifications are required relative to MOT. Any other certifications that may be required by applicable permitting agencies for the Work shall also be complied with by the Contractor. Failure to pursue the Work with the properly certified supervisory staff may result in notice to stop work or terminate the Agreement in accordance with Article 17.

8.9 Materials:

- 8.9.1 The Contractor shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of Work.

- 8.9.2 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. Suppliers shall be selected and paid by the Contractor; the City reserves the right to approve all suppliers and materials.

- 8.10 Work Hours: Except in connection with the safety or protection of persons, or the Work, or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all work at the site shall be performed during regular working hours between 8 a.m. and 5:00 p.m., Monday through Friday.

Unless approved by the City in advance, the Contractor will not perform work on Saturday, Sunday or any legal holiday (designated by the City of Fort Lauderdale) without the Project Manager's written consent at least seventy-two (72) hours in advance of starting such work. For any overtime inspection required by City personnel, the Contractor shall pay for the additional charges to the City with respect to such overtime work. Such additional charges shall be a subsidiary obligation of the Contractor and no extra payment shall be made to the Contractor for overtime work. **It shall be noted that the City's Inspector work hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday, and any work requiring inspection oversight being performed outside of this timeframe shall be paid for by the Contractor as Inspector overtime at a rate of \$100.00 per hour.** The cost to the Contractor to reimburse the City for overtime inspection is established at direct-labor and overtime costs for each person or inspector required. Incidental overtime costs for engineering, testing and other related services will also be charged to the Contractor at the actual rate accrued.

8.11 **Patent Fee and Royalties:** The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work, or any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. The Contractor hereby expressly binds himself or itself to indemnify and hold harmless the City from all such claims and fees and from any and all suits and action of every name and description that may be brought against City on account of any such claims, fees, royalties, or costs for any such invention or patent, and from any and all suits or actions that may be brought against said City for the infringement of any and all patents or patent rights claimed by any person, firm corporation or other entity.

8.12 **Permits:** The Contractor shall obtain and pay for all permits and licenses. There shall be no allowance for Contractor markup, overhead or profit for permits and licenses.

The Contractor shall pay all government charges which are applicable at the time of opening of proposals. It shall be the responsibility of the Contractor to secure and pay for all necessary licenses and permits of a temporary nature necessary for the prosecution of Work.

8.13 **Law and Regulations:** The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the specifications or plans are in conflict, the Contractor shall give the Project Manager prompt written notice thereof within five (5) calendar days, and any necessary changes shall be adjusted by any appropriate modifications. If the Contractor performs any work knowing or having reason to know that it is contrary to such laws, ordinances, rules, standards, specifications and regulations, and without such notice to the Project Manager, the Contractor shall bear all costs arising therefrom.

8.14 **Taxes:** The Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the laws of the City of Fort Lauderdale, County of Broward, and the State of Florida.

8.15 **Contractor Use of Premises:** The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits and/or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

The Contractor shall not enter upon private property for any purpose without first securing the permission of the property owner in writing and furnishing the Project Manager with a copy of said permission. This requirement will be strictly enforced, particularly with regard to such vacant properties as may be utilized for storage or staging by the Contractor.

The Contractor shall conduct its work in such a manner as to avoid damage to adjacent private or public property. Any damage to existing structures of work of any kind, including permanent reference markers or property corner markers, or the interruption of a utility service, shall be repaired or restored promptly at no expense to the City or property owner.

The Contractor will preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site which do not reasonably interfere with the construction, as determined by the Project Manager. The Contractor will be responsible for repairing or replacing any trees, shrubs, lawns and landscaping that may be damaged due to careless operation of equipment, stockpiling of materials, tracking of grass by equipment or other construction activity. The Contractor will be liable for, or will be required to replace or restore at no expense to the City all properties and areas not protected or preserved as required herein that may be destroyed or damaged.

During the progress of the Work, the Contractor shall keep the premises free from accumulation of waste materials, rubbish and debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials and shall leave the site clean and ready for occupancy by the City. The Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents at no cost to the City.

- 8.16 Project Coordination: The Contractor shall provide for the complete coordination of the construction effort. This shall include, but not necessarily be limited to, coordination of the following:

8.16.1 Flow of material and equipment from suppliers.

8.16.2 The interrelated work with affected utility companies.

8.16.3 The interrelated work with the City where tie-ins to existing facilities are required.

8.16.4 The effort of independent testing agencies.

8.16.5 Notice to affected property owners as may be directed by the Project Manager.

8.16.6 Coordination with and scheduling of all required inspections from all permitting agencies.

- 8.17 Project Record Documents and Final As-Builts (Record Drawings): Contractor shall be responsible for maintaining up-to-date redline as-built drawings, on site, at all times during construction. All as-built information shall be surveyed and verified by a professional land surveyor registered in the State of Florida. Contractor shall provide the City with a minimum of three (3) sets of signed and sealed record drawings (Final As-Builts) and a CD of the electronic drawings files created in AutoCad 2014 or later. All costs associated with survey work required for construction layout and as-built preparation shall be the responsibility of the Contractor.

- 8.18 Safety and Protection:

8.18.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

8.18.1.1 All employees working on the project and other persons who may be affected thereby.

- 8.18.1.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
- 8.18.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

8.18.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and utilities when execution of the Work may affect them at least seventy-two (72) hours in advance (unless otherwise required). All damage, injury or loss to any property caused, directly or indirectly, in whole or in part by the Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. The Contractor's duties and responsibilities for safety and protection of the Work shall continue until such time as all the Work is completed and accepted by the City.

- 8.19 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the City, is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Project Manager prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.
- 8.20 Risk of Loss: The risk of loss, injury or destruction shall be on the Contractor until acceptance of the Work by the City. Title to the Work shall pass to the City upon acceptance of the Work by the City.
- 8.21 Environmental: The Contractor has fully inspected the Premises and agrees, except as to the presence of any asbestos, to accept the Premises in an "as is" physical condition, without representation or warranty by the City of any kind, including, without limitation, any and all existing environmental claims or obligations that may arise from the presence of any "contamination" on, in or about the Premises. Further, Contractor and all entities claiming by, through or under the Contractor, releases and discharges the City from any claim, demand, or cause of action arising out of or relating to the Contractor's use, handling, storage, release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of any hazardous substances including asbestos on, under, from or about the Premises. The Contractor shall have no liability for any pre-existing claims or "contamination" on the Premises.

The Contractor shall not use, handle, store, discharge, treat, remove, transport, or dispose of Hazardous Substances including asbestos at, in, upon, under, to or from the Premises until receipt of instructions from the City. At such time, a City approved Change Order, which shall not include any profit, shall authorize the Contractor to perform such services.

The Contractor shall immediately deliver to the Project Manager complete copies of all notices, demands, or other communications received by the Contractor from any governmental or quasi-governmental authority or any insurance company or board of fire underwriters or like or similar entities regarding in any way alleged violations or potential violations of any Environmental Law or otherwise asserting the existence or potential existence of any condition or activity on the Premises which is or could be dangerous to life, limb, property, or the environment.

For other and additional consideration, the Contractor hereby agrees, at its sole cost and expense, to indemnify and protect, defend, and hold harmless the City and its respective employees, agents, officials, officers, representatives, contractors and subcontractors, successors, and assigns (hereafter the "City") from and against any and all claims, demands, losses, damages, costs, expenses, including but not limited to mitigation, restoration, and natural restoration expenses, liabilities, assessments, fines, penalties charges, administrative and judicial proceedings and orders, judgments, causes of action, in law or in equity, remedial action requirements and/or enforcement actions of any kind (including, without limitation, attorneys' fees and costs) directly or indirectly arising out of or attributable to, in whole or in part, the Contractor's use, handling, storage, release, threatened release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of a Hazardous Substance (excluding asbestos) on, under, from, to or about the Premises or any other activity carried on or undertaken on or off the Premises by the Contractor or its employees, agents or subcontractors, in connection with the use, handling, storage, release, threatened release, discharge, treatment, mitigation, natural resource restoration, removal, transport, decontamination, cleanup, disposal and/or presence or any Hazardous Substance including asbestos located, transported, or present on, undue, from, to, or about the Premises. This indemnity is intended to be operable under 42 U.S.C. Section 9607, as amended or revised, and any successor section.

The scope of the indemnity obligations includes, but is not limited to: (a) all consequential damages; (b) the cost of any required or necessary repair, cleanup, or detoxification of the applicable real estate and the preparation and implementation of any closure, remedial or other required plan, including without limitation; (i) the costs of removal or remedial action incurred by the United States government or the State of Florida or response costs incurred by any other person, or damages from injury to destruction of, or loss of, natural resources, including the cost of assessing such injury, destruction, or loss, incurred pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended; (ii) the clean-up costs, fines, damages, or penalties incurred pursuant to any applicable provisions of Florida law; and (iii) the cost and expenses of abatement, correction or cleanup, fines, damages, response costs, or penalties which arise from the provisions of any other statute, law, regulation, code ordinance, or legal requirement state or federal; and (c) liability for personal injury or property damage arising under any statutory or common law tort theory, including damages assessed for the maintenance of a public private nuisance, response costs, or for the carrying on of an abnormally dangerous activity.

8.22 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any other reason or allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

8.23 No Liens: If any subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the Work is performed or any part or against any personal property or improvements or claim against any monies due or to become due from the City to Contractor or from Contractor to a subcontractor, for or on account of any work, labor, services, material, equipment, or other items furnished in connection with the Work or any Change Order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within twenty (20) days of the filing or from receipt of written notice from the City.

Additionally, until such time as such lien or claim is satisfied, removed or discharged by Contractor, all monies due to Contractor, or that become due to Contractor before the lien or claim is satisfied, removed or otherwise discharged, shall be held by City as security for the satisfaction, removal and discharge of such lien and any expense that may be incurred while obtaining such. If Contractor shall fail to do so, City shall have the right, in addition to all other rights and remedies provided by this Agreement or by law, to satisfy, remove, or discharge such lien or claim by whatever means City chooses at the entire and sole cost and expense of Contractor which costs and expenses shall, without limitation, include attorney's fees, litigation costs, fees and expenses and all court costs and assessments.

8.24 Weather Emergencies: Upon issuance of a hurricane watch by the National Weather Service, the Contractor shall submit to the City a plan to secure the work area in the event a hurricane warning is issued. The plan shall detail how the Contractor will secure the Premises, equipment and materials in a manner as to prevent damage to the Work and prevent materials and equipment from becoming a hazard to persons and property on and around the Premises. The plan shall include a time schedule required to accomplish the hurricane preparations and a list of emergency contacts that will be available, and in the City before, during and immediately after the storm.

Upon issuance of a hurricane warning by the National Weather Service, if the Contractor has not already done so, the Contractor shall implement its hurricane preparedness plan. Cost of development and implementation of the hurricane preparedness plan shall be considered as incidental to construction. Cost of any clean

up and rework required after the storm will be considered normal construction risk within Florida and shall not entitle the Contractor to any additional compensation. Contractor shall be entitled to request an extension in time for completion of the Work, in accordance with the provisions of Article 15 of this Agreement, equal to the time it is shut down for implementation of the preparedness plan, the duration of the storm and a reasonable period to restore the Premises.

- 8.25 **Force Majeure:** No Party shall hold the other responsible for damages or for delays in performance caused by force majeure, acts of God, or other acts or circumstances beyond the control of the other party or that could not have been reasonably foreseen and prevented. For this purpose, such acts or circumstances shall include, but not be limited to weather conditions affecting performance, floods, epidemics, pandemics, war, act of Governmental Authority, state of emergency, riots, strikes, lockouts, or other industrial disturbances, or protest demonstrations. Should such acts or circumstances occur, the parties shall use their best efforts to overcome the difficulties arising therefrom and to resume the Work as soon as reasonably possible with the normal pursuit of the Work.

Inclement weather, continuous rain for less than three (3) days or the acts or omissions of subcontractors, third-party contractors, materialmen, suppliers, or their subcontractors, shall not be considered acts of force majeure.

No Party shall be liable for its failure to carry out its obligations under the Agreement during a period when such Party is rendered unable by force majeure to carry out its obligation, but the obligation of the Party or Parties relying on such force majeure shall be suspended only during the continuance of the inability and for no longer period than the unexpected or uncontrollable event.

The Contractor further agrees and stipulates, that its right to excuse its failure to perform by reason of force majeure shall be conditioned upon giving written notice of its assertion that a Force Majeure delay has commenced within ninety-six (96) hours after such an occurrence. The Contractor shall use its reasonable efforts to minimize such delays. The Contractor shall promptly provide an estimate of the anticipated additional time required to complete the Project.

- 8.26 **Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assisted Contracts:** The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this Agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this Agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 *et seq.*).

Additionally, the Contractor assures that it, the sub-recipient or its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate. This additional language must be included in each subcontract the prime Contractor signs with a subcontractor.

ARTICLE 9 – CITY’S RESPONSIBILITIES

- 9.1 The City shall furnish the data required of the City under the Contract Documents promptly and shall make payments to the Contractor promptly after they are due as provided in Article 7.
- 9.2 The City shall provide public rights-of-way and easement, where available, for the installation of conduits, transformers pads and related appurtenances only.
- 9.3 Technical Clarifications and Interpretations:
 - 9.3.1 The City shall issue, with reasonable promptness, such written clarifications or interpretations of the Contract Documents as it may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. Should the Contractor fail to request interpretation of questionable items in the Contract Documents, the City shall not entertain any excuse for failure to execute the Work in a satisfactory manner.
 - 9.3.2 The City shall interpret and decide matters concerning performance under the requirements of the Contract Documents, and shall make decisions on all claims, disputes or other matters in question. Written notice of each claim, dispute or other matter will be delivered by claimant to the other Party but in no event later than five (5) days after the occurrence of event, and written supporting data will be submitted to the other Party within five (5) days after such occurrence. All written decisions of the City on any claim or dispute will be final and binding.
- 9.4 The Contractor shall perform all Work to the reasonable satisfaction of the City in accordance with the Contract Documents. In cases of disagreement or ambiguity, the City shall decide all questions, difficulties, and disputes of whatever nature, which may arise under or by reason of this Agreement or the quality, amount and value of the Work, and the City’s decisions on all claims, questions and determination are final.
- 9.5 Cancellation for Unappropriated Funds: The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.

ARTICLE 10 – BONDS AND INSURANCE

- 10.1 Public Construction and Other Bonds: The Contractor shall furnish Public Construction or Performance and Payment Bonds ("Bond"), each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. These Bonds shall remain in effect until at least one (1) year after the date of final payment, except as otherwise provided by law. All Bonds shall be furnished and provided by the surety and shall be in substantially the same form as prescribed by the Contract Documents and be executed by such sureties as (i) are licensed to conduct business in the State of Florida, and (ii) are named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department and (iii) otherwise meet the requirements set forth herein that apply to sureties. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

- 10.1.1 Performance Bond: The Contractor shall execute and record in the public records of Broward County, Florida, a payment and performance bond in an amount at least equal to the Contract Price with a surety insurer authorized to do business in the State of Florida as surety, ("Bond"), in accordance with Section 255.05, Florida Statutes (2022), as may be amended or revised, as security for the faithful performance and payment of all of the Contractor's obligations under the Contract Documents.

A Corporate Surety Bond legally issued, meeting the approval of, and running to the City in an amount not less than the Contract Price of such improvements, conditioned that the Contractor shall maintain and make all repairs to the improvements constructed by the Contractor at their own expense and free of charge to the City, for the period of one (1) year after the date of acceptance of the Work within such period by reason of any imperfection of the material used or by reason of any defective workmanship, or any improper, imperfect or defective preparation of the base upon which any such improvement shall be laid.

- 10.2 Disqualification of Surety: If the Surety on any Bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Florida or it ceases to meet the requirements of clauses (i) and (ii) of Paragraph 10.1, the Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which shall be acceptable to the City.

10.3 Insurance

As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of

coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

The coverages, limits, and/or endorsements required herein protect the interests of the City, and these coverages, limits, and/or endorsements shall in no way be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

Commercial General Liability

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$2,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$2,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipal corporation, its officials, employees, and volunteers are to be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

Professional Liability

Coverage must be afforded for Wrongful Acts in an amount not less than \$1,000,000 each claim and \$2,000,000 aggregate.

Contractor must keep the professional liability insurance in force until the third anniversary of expiration or early termination of this Agreement or the third anniversary of acceptance of work by the City, whichever is longer, which obligation shall survive expiration or early termination of this Agreement.

Business Automobile Liability

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than \$1,000,000 combined single limit each accident.

If the Contractor does not own vehicles, the Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation and Employer's Liability

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

The Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act and the Jones Act, if applicable.

Insurance Certificate Requirements

- a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
- b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term or any surviving obligation of the Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation and Professional Liability.
- g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

City of Fort Lauderdale
100 N. Andrews Avenue
Fort Lauderdale, FL 33301

The Contractor has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.

If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.

The Contractor's insurance coverage shall be primary insurance as respects to the City, a Florida municipal corporation, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, a Florida municipal corporation, its officials, employees, or volunteers shall be non-contributory.

Any exclusion or provision in any insurance policy maintained by the Contractor that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.

All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.

The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement to the Contractor's insurance company or companies and the City's Risk Management office, as soon as practical.

It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.

NOTE: CITY PROJECT NUMBER, PROJECT NAME AND BID NUMBER MUST APPEAR ON EACH CERTIFICATE, AND THE CITY OF FORT LAUDERDALE MUST BE NAMED ON THE CERTIFICATE AS AN "ADDITIONAL INSURED" ON REQUIRED LIABILITY POLICIES.

**ARTICLE 11- WARRANTY AND GUARANTEE, TESTS AND INSPECTIONS,
CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

- 11.1 Warranty: The Contractor warrants and guarantees to the City that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.
- 11.1.1 Warranty of Title: The Contractor warrants to the City that it possesses good, clear and marketable title to all equipment and materials provided and that there are no pending liens, claims or encumbrances against the equipment and materials.
- 11.1.2 Warranty of Specifications: The Contractor warrants that all equipment, materials and workmanship furnished, whether furnished by the Contractor, its subcontractors or suppliers, will comply with the specifications, drawings and other descriptions supplied or adopted and that all services will be performed in a workmanlike manner.
- 11.1.3 Warranty of Merchantability: The Contractor warrants that any and all equipment to be supplied pursuant to this Agreement is merchantable, free from defects, whether patent or latent in material or workmanship, and fit for the ordinary purposes for which it is intended.
- 11.2 Tests and Inspections: Contractor shall retain the services of an independent, certified, testing lab to perform all testing as required by the specifications, contract drawings, and any applicable permitting agency. Contractor shall provide evidence of certification to the City before the work and testing is done. Testing results shall be submitted to the Project Manager for review and approval at the time the results are provided to the Contractor. The Contractor shall give the Project Manager and City Inspector a minimum of twenty-four (24) hours' advanced notice of readiness of the Work for all required inspections, tests, or approvals and shall notify all applicable permitting agencies in a timely manner based on requirements set forth in the permit documents.
- 11.2.1 Neither observations by the Project Manager nor inspections, tests or approvals by others shall relieve the Contractor from its obligations to perform the Work in accordance with the Contract Documents.
- 11.3 Uncovering Work: If any work that is to be inspected, tested or approved is covered without approval or consent of the Project Manager, it must, if requested by the Project Manager, be uncovered for observation and/or testing. Such uncovering and replacement shall be at the Contractor's sole expense unless the Contractor has given the Project Manager timely notice of the Contractor's intention to cover such Work and the Project Manager has not acted with reasonable promptness in response to such notice.
- 11.3.1 If the Project Manager considers it necessary or advisable that Work covered in accordance with Paragraphs 11.2.1 be observed by the City or inspected or tested by others, the Contractor at the City's request, shall uncover, expose or

otherwise make available for observation, inspection or testing as the Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection testing and reconstruction if it makes a claim therefore as provided in Articles 14 and 15.

11.4 City May Stop the Work: If the Work is defective, or the Contractor fails to supply sufficient skilled supervisory personnel or workmen or suitable materials or equipment or the work area is deemed unsafe, the City may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other Party. The City will not award any increase in Contract Price or Contract Time if the Work is stopped due to the circumstances described herein.

11.5 Correction or Removal of Defective Work Before Final Payment: If required by the Project Manager, the Contractor shall promptly, without cost to the City and as specified by the Project Manager, either correct any defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by the City remove it from the site and replace it with non-defective Work.

11.6 One Year Correction Period After Final Payment: If within one (1) year after the date of final acceptance, or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, the Contractor shall promptly, without cost to the City and in accordance with the City's written instructions, either correct such defective Work, or, if it has been rejected by the City, remove it from the site and replace it with non-defective Work.

If the Contractor does not promptly comply with the terms of such instructions or in an emergency where delay would cause serious risk of loss or damage, the City may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs for such removal and replacement, including compensation for additional professional services, shall be paid by the Contractor.

11.7 Acceptance of Defective Work, Deductions: If, instead of requiring correction or removal and replacement of defective Work, the City, at the City's sole option, prefers to accept it, the City may do so. In such a case, if acceptance occurs prior to the Project Manager's recommendation of final payments, a Change Order shall be issued incorporating the necessary revisions in the Contract's Documents, including appropriate reduction in the Contract Price; or if the acceptance occurs after such recommendation, an appropriate amount shall be paid by the Contractor to the City.

- 11.8 City May Correct Defective Work: If the Contractor fails within a reasonable time after written notice of the Project Manager to proceed to correct defective Work or to remove and replace rejected Work as required by the Project Manager in accordance with Paragraph 11.5, or if the Contractor fails to perform the Work in accordance with the Contract Documents, the City may, after seven (7) days' written notice to the Contractor, correct and remedy any such deficiency. In exercising its rights under this paragraph, the City shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, suspend the Contractor's services related thereto and take possession of the Contractor's tools, construction equipment and materials stored at the site or elsewhere. The Contractor shall allow the City's representative agents and employees such access to the site as may be necessary to enable the City to exercise its rights under this paragraph. All direct and indirect costs of the City in exercising such rights shall be charged against the Contractor in an amount verified by the Project Manager, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitation, compensation for additional professional services required and costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the Contractor's defective Work. The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the City of the City's right hereunder.

ARTICLE 12 – INDEMNIFICATION

- 12.1 Disclaimer of Liability: The City shall not at any time, be liable for injury or damage occurring to any person or property from any cause, whatsoever, arising out of Contractor's construction and fulfillment of this Agreement.
- 12.2 Indemnification: For other, additional good valuable consideration, the receipt and sufficiency of which is hereby acknowledged:
- 12.2.1 Contractor shall, at its sole cost and expense, indemnify and hold harmless the City, its representatives, employees and elected and appointed officials from or on account of all claims, damages, court costs, and reasonable attorney's fees (including but not limited to: pre-trial, trial, and appellate attorney's fees), other costs, fees, charges, losses, liabilities and expenses, direct, indirect or consequential which are caused by or result from negligence, recklessness, or intentional wrongful misconduct of the Contractor, its employees, and any other person(s) or entity (ies) utilized in the performance of this Agreement, including but not limited to Contractor's agents, its employees, its subcontractors, its suppliers engineers, architects, consultants and other professionals. Indemnification shall specifically include but not be limited to claims, damages, losses, liabilities and expenses arising out of or from (a) the negligent or defective design of the project and Work of this Agreement; (b) any act, omission or default of the Contractor, its subcontractors, agents, suppliers, employees or laborers; (c) any and all bodily injuries, sickness, disease or death; (d) injury to or destruction of tangible property, including any resulting loss of use; (e) other such damages, liabilities, or losses received or sustained by any person or persons during or on account of any operations connected with the construction of this Project including the warranty period; (f) the use of any improper materials; (g)

any construction defect including both patent and latent defects; (h) failure to timely complete the work; (i) the violation of any federal, state, county or City laws, ordinances or regulations by Contractor, its subcontractors, agents, servants, independent contractors or employees; (j) the breach or alleged breach by Contractor of any term of the Agreement, including the breach or alleged breach of any warranty or guarantee. Indemnification in this subsection excludes claims or damages resulting from gross negligence or actions that are willful or wanton, or claims or damages that result from intentional misconduct, if the claims or damages are caused or result from actions of the City, its employees, its officers, its directors, its agents and any others excluded in accordance Section 725.06, Florida Statutes, as amended.

- 12.2.2 Contractor agrees to indemnify, defend, and hold harmless the City, its officers, agents and employees, from all damages, liabilities, losses, claims, fines and fees, and from any and all suits and actions of every name and description that may be brought against City, its officers, agents and employees, on account of any claims, fees, royalties, or costs for any invention or patent and/or for the infringement of any and all copyrights or patent rights claimed by any person, firm, or corporation.
- 12.2.3 Contractor shall pay all claims, losses, liens, settlements or judgments of any nature in connection with the foregoing indemnifications including, but not limited to, reasonable attorney's fees and costs for trials and appeals.
- 12.2.4 If any subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the work is performed or any part or against any personal property or improvements thereon or make a claim against any monies due or to become due from the City to Contractor or from Contractor to a subcontractor, for or on account of any work, labor, services, material, equipment, or other items furnished in connection with the Work or any change order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within five (5) days of the filing or from receipt of written notice from the City.

Additionally, until such time as such lien or claim is satisfied, removed or discharged by Contractor, all monies due to Contractor, or that become due to Contractor before the lien or claim is satisfied, removed or otherwise discharged, shall be held by City as security for the satisfaction, removal and discharge of such lien and any expense that may be incurred while obtaining the discharge. If Contractor shall fail to do so, City shall have the right, in addition to all other rights and remedies provided by this Agreement or by law, to satisfy, remove, or discharge such lien or claim by whatever means City chooses at the entire and sole cost and expense of Contractor which costs and expenses shall, without limitation, include attorney's fees, litigation costs, fees and expenses and all court costs and assessments, and which shall be deducted from any amount owing to Contractor. In the event the amount due Contractor is less than the amount required to satisfy Contractor's obligation under this, or any other article, paragraph or section of this Agreement, the Contractor shall be liable for the deficiency due the City.

12.2.5 The Contractor and the City agree that Section 725.06(2), Florida Statutes (2022), as may be amended or revised, controls the extent and limits of the indemnification and hold harmless provisions of this Agreement, if any, and that the Parties waive any defects in the wording of this Article that runs afoul of said statutory section.

ARTICLE 13 – CHANGES IN THE WORK

- 13.1 Without invalidating this Agreement, the City may, at any time or from time-to-time order additions, deletions or revisions in the Work through the issuance of Change Orders. Upon receipt of a Change Order, the Contractor shall proceed with the Work involved. All Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 14 or Article 15 on the basis of a claim made by either Party.
- 13.2 The Project Manager may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall intent of the Contract Documents. Such changes must be in writing and signed by the City and the Contractor.
- 13.3 If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be the Contractor's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. The Contractor shall furnish proof of such adjustment to the City.

ARTICLE 14 – CHANGE OF CONTRACT PRICE

Change of Contract Price, approved by City, shall be computed as follows:

- 14.1 Cost of the Work: The term "Cost of the Work" means the sum of all direct costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by the City, these costs shall be in amounts no higher than those prevailing in the City and shall include only the following items and shall not include any of the costs itemized in Paragraph 14.3:
- 14.1.1 Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications agreed upon by the City and the Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work.
- Payroll costs shall include, but not be limited to, salaries and wages plus cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker's compensation, health and retirement benefits, bonuses, sick leave, vacation and applicable holiday pay.
- 14.1.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage, and required suppliers and field services. All cash discounts, rebates and refunds and all returns from sale of

surplus materials and equipment shall accrue to the City, and the Contractor shall make provisions so that they may be obtained.

14.1.3 Supplemental costs including the following:

- 14.1.3.1 Cost, including transportation and maintenance of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work.
- 14.1.3.2 Rentals of all construction equipment and machinery and the parts whether rented from the Contractor or others in accordance with rental agreements approved by the City, and the costs of transporting, loading, unloading, installation, dismantling and removal. The rental of any such equipment, machinery or parts shall cease when the use is no longer necessary for the Work.
- 14.1.3.3 Sales, consumer, use or similar taxes related to the Work and for which the Contractor is liable, imposed by laws and regulations.
- 14.1.3.4 Royalty payments and fees for permits and licenses.
- 14.1.3.5 The cost of utilities, fuel and sanitary facilities at the Work site.
- 14.1.3.6 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.
- 14.1.3.7 Cost of premiums for additional bonds and insurance required because of changes in the Work.

14.2 The Contract Price may only be increased by a Change Order when Work is modified in accordance with Article 13 and approved by the City in writing. Any claim for an increase in the Contract Price resulting from a Change Order shall be based on written notice delivered to the Project Manager within ten (10) days of the occurrence of the Change Order giving rise to the claim. Notice of the amount of the claim with supporting data shall be included in the Change Order and delivered within twenty (20) days of such occurrence unless Project Manager allows an additional period of time to ascertain accurate cost data. Any change in the Contract Price resulting from any such claim shall be incorporated in the Change Order. **IT IS EXPRESSLY AND SPECIFICALLY AGREED THAT ANY AND ALL CLAIMS FOR CHANGES TO THE CONTRACT PRICE SHALL BE WAIVED IF NOT SUBMITTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.**

14.3 Not Included in the Cost of the Work: The term "Cost of the Work" shall not include any of the following:

- 14.3.1 Payroll costs and other compensation of the Contractor's officers' executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditor, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel

employed by the Contractor whether at the site or in the Contractor's principal or branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 14.1.1, all of which are to be considered administrative costs covered by the Contractor's fee.

14.3.2 Expenses of the Contractor's principal and branch offices other than the Contractor's office at the site.

14.3.3 Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work and charges against the Contractor for delinquent payments.

14.3.4 Cost of premiums for all bonds and for all insurance whether or not the Contractor is required by the Contract Documents to purchase and maintain the same.

14.3.5 Costs due to the negligence of the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

14.3.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 14.1.

14.4 Basis of Compensation: The Contractor's compensation, allowed to the Contractor for overhead and profit, shall be determined as follows:

14.4.1 A mutually acceptable negotiated fee:

14.4.1.1 For costs incurred under Paragraphs 14.1.1 and 14.1.2, the Contractor's fee shall not exceed five percent (5%).

14.4.1.2 No fee shall be payable on the basis of costs itemized under Paragraphs 14.1.3.1, 14.1.3.2, 14.1.3.3, 14.1.3.4, 14.1.3.5, 14.1.3.6, 14.1.3.7, 14.3.1, 14.3.2, 14.3.3, 14.3.4, 14.3.5 and 14.3.6.

14.4.1.3 The amount of credit to be allowed by the Contractor to the City for any such change which results in a net decrease plus a deduction in the Contractor's fee by an amount equal to five percent (5%) for the net decrease.

14.4.1.4 When both additions and credits are involved in any one change the combined overhead and profit shall be figured on the basis of net increase if any, however, not to exceed five percent (5%) of the agreed compensation. Profit will not be paid on any Work not performed.

14.5 **Cost Breakdown Required:** Whenever the cost of any Work is to be determined pursuant to this Article, the Contractor will submit in form acceptable to the City an itemized cost breakdown together with supporting documentation. Whenever a change in the Work is to be based upon mutual acceptance of a lump sum, whether the amount is an addition, credit, or no-charge-in-cost, the Contractor shall submit an estimate substantiated by a complete itemized breakdown:

14.5.1 The breakdown shall list quantities and unit prices for materials, labor, equipment and other items of cost.

14.5.2 Whenever a change involves the Contractor and one (1) or more subcontractors and the change is an increase in the agreed compensation, the overhead and profit percentage for the Contractor and each subcontractor shall be itemized separately.

14.6 **Time for the City to Approve Extra Work:** Any Extra Work in an amount up to and not exceeding a cumulative amount of \$25,000 for a specific project can be approved by the City Manager and shall require a written Change Order proposal to be submitted to the Public Works Director for submittal and approval by the City Manager. Extra Work exceeding the cumulative amount of \$25,000 for a specific project must be approved by the City Commission and a written Change Order proposal must be submitted to the Public Works Director for submittal and approval by the City Manager and City Commission. No financial or time claim for delay to the project resulting from the Change Order approval process outlined above under Section 14.6 will be allowed.

ARTICLE 15 – CHANGE OF THE CONTRACT TIME

15.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Project Manager within five (5) days of the occurrence of the event giving rise to the claim. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

15.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made therefore as provided in Paragraph 15.1. Such delays shall include but not be limited to, acts or neglect by the City, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, pandemics, act of Governmental Authority, state of emergency, or acts of God.

15.3 All time limits stated in the Contract Documents are of the essence. The provisions of this Article 15 shall not exclude recovery for damages for delay by the Contractor.

15.4 Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor (non-affiliated Contractors) shall not give rise to a claim by the Contractor for damages for increases in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T and Florida East Coast Railway, LLC.

- 15.5 Rights of Various Interests: Whenever work being done by City's forces or by other contractors is contiguous to or within the limits of work covered by this Agreement, the respective rights of the various interests involved shall be established by the Project Manager to secure the completion of the various portions of the Work in general harmony.

ARTICLE 16 – LIQUIDATED DAMAGES

- 16.1 Upon failure of the Contractor to complete the Work within the time specified for completion, the Contractor shall pay to the City the sum of **Two Hundred and Fifty Dollars (\$250.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. Should an act of God or the acts or omissions of the City, its agents or representatives, in derogation to the terms of this Agreement cause the delay, the Contractor shall not be responsible for the delay nor liquidated damages. Liquidated damages are fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by the City as a consequence of such delay and both Parties desiring to obviate any question of dispute concerning the amount of damages and the cost and effect of the failure of the Contractor to complete the Work on time. Liquidated damages shall apply separately to each portion of the Work for which a time of completion is given. The City shall have the right to deduct from or retain any compensation which may be due or which may become due and payable to the Contractor the amount of liquidated damages, and if the amount retained by the City is insufficient to pay in full such liquidated damages, the Contractor shall pay all liquidated damages in full. The Contractor shall be responsible for reimbursing the City, in addition to liquidated damages or other damages for delay, for all costs of engineering, architectural fees, and inspection and other costs incurred in administering the construction of the Project beyond the completion date specified or beyond an approved extension of time granted to the Contractor whichever is later. Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor shall not give rise to a claim by Contractor for damages for increase in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T, and Florida East Coast Railway, LLC.

In addition, for work beyond the time (hour and minute) established for opening the taxiway/runway, following each closure of that taxiway/runway in accordance with the phasing plans, the City will charge the Contractor a rental fee for the Contractor's use of the taxiway/runway. The parties agree that the sum of **Five Hundred Dollars (\$500)** for the first minute and **Fifty Dollars (\$50)** for every minute thereafter shall be fixed as the rental rates for continuing a taxiway/runway closure beyond the time provided for opening the taxiway/runway during each phase of work that requires taxiway/runway closure.

The Contractor shall pay to the City, or have withheld from monies due the Contractor, the rental sum of **Five Hundred Dollars (\$500)** per the first minute and **Fifty Dollars (\$50)** for every minute thereafter that the Contractor continues a taxiway/runway closure beyond the specified time provided for opening the taxiway/runway during each phase of work that requires closure.

Time for opening of the taxiway/runway and rental fee determinations shall be based upon the City's inspector's time keeping, not the Contractor. Contractor may request the inspector to advise him of remaining time periodically prior to opening, but inspector's time keeping shall be the sole determining factor as to whether the taxiway/runway reopened as scheduled without appeal.

- 16.2 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

ARTICLE 17 – SUSPENSION OF WORK AND TERMINATION

- 17.1 City May Suspend Work: The City may, at any time and without cause, suspend the Work or any portion of the Work for a period of not more than ninety (90) days by notice in writing to the Contractor which shall fix the date on which Work shall be resumed. The Contractor shall resume the Work on the date fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension, if the Contractor makes a claim as provided in Articles 14 and 15.
- 17.2 City's Right to Terminate Contract: The City may terminate this Agreement upon fifteen (15) calendar days' written notice upon the occurrence of any one or more of the following events:
- 17.2.1 If the Contractor makes a general assignment for the benefit of creditors.
- 17.2.2 If a trustee, receiver, custodian or agent of the Contractor is appointed under applicable law or under Contract, whose appointment or authority to take charge of property of the Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of the Contractor's creditors.
- 17.2.3 If Contractor fails to begin the Work within fifteen (15) calendar days after the Project Initiation Date, or fails to perform the Work with sufficient workers and equipment or with sufficient materials to ensure the prompt completion of the

Work, or shall perform the Work unsuitably, or cause it to be rejected as defective and unsuitable, or shall discontinue the prosecution of the Work pursuant to the accepted schedule or if Contractor shall fail to perform any material term set forth in the Contract Documents, or from any other cause whatsoever shall not carry on the Work in an acceptable manner, Project Manager may give notice in writing to Contractor and its Surety of such delay, neglect or default, specifying the same.

17.2.4 If the Contractor repeatedly fails to make prompt payments to subcontractors or for labor, material or equipment.

17.2.5 If the Contractor repeatedly disregards proper safety procedures.

17.2.6 If the Contractor disregards any local, state or federal laws or regulations.

17.2.7 If the Contractor otherwise violates any provisions of this Agreement.

17.3 If Contractor, within a period of ten (10) calendar days after such notice, shall not proceed in accordance therewith, the City may exclude the Contractor from the Work site and take the prosecution of the Work out of the hands of the Contractor, and take possession of the Work and all of the Contractor's tools, appliances, construction equipment and machinery at the site and use them without liability to the City for trespass or conversion, incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere, and finish the Work as the City may deem expedient. In this instance, the Contractor shall not be entitled to receive any further compensation until the Work is finished.

17.3.1 If after notice of termination of Contractor's right to proceed, it is determined for any reason that Contractor was not in default, the rights and obligations of City and Contractor shall be the same as if the notice of termination had been issued pursuant to the Termination for Convenience clause as set forth in Section 17.5 below.

17.3.2 Upon receipt of Notice of Termination pursuant to Sections 17.2 or 17.5, Contractor shall promptly discontinue all affected work unless the Notice of Termination directs otherwise and deliver or otherwise make available to City all data, drawings, specifications, reports, estimates, summaries and such other information as may have been required by the Contract Documents whether completed or in process.

17.4 If the Contractor commits a default due to its insolvency or bankruptcy, the following shall apply:

17.4.1 Should this Agreement be entered into and fully executed by the Parties, funds released and the Contractor (Debtor) files for bankruptcy, the following shall occur:

17.4.1.1 In the event the Contractor files a voluntary petition under 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303, the Contractor shall acknowledge the extent, validity, and priority of the lien recorded in favor of the City. The Contractor further agrees that in

the event of this default, the City shall, at its option, be entitled to seek relief from the automatic stay pursuant to 11 U.S.C. 362. The City shall be entitled to relief from the automatic stay pursuant to 11 U.S.C. 362(d) (1) or (d) (2), and the Contractor agrees to waive the notice provisions in effect pursuant to 11 U.S.C. 362 and any applicable Local Rules of the United States Bankruptcy Court. The Contractor acknowledges that such waiver is done knowingly and voluntarily.

17.4.1.2 Alternatively, in the event the City does not seek stay relief, or if stay relief is denied, the City shall be entitled to monthly adequate protection payments within the meaning of 11 U.S.C. 361. The monthly adequate protection payments shall each be in an amount determined in accordance with the Note and Mortgage executed by the Contractor in favor of the City.

17.4.1.3 In the event the Contractor files for bankruptcy under Chapter 13 of Title 11, United States Code in addition to the foregoing provisions, the Contractor agrees to cure any amounts in arrears over a period not to exceed twenty-four (24) months from the date of the confirmation order, and such payments shall be made in addition to the regular monthly payments required by the Note and mortgage. Additionally, the Contractor shall agree that the City is over secured and, therefore, entitled to interest and attorney's fees pursuant to 11 U.S.C. 506(b). Such fees shall be allowed and payable as an administrative expense. Further, in the event the Contractor has less than five (5) years of payments remaining on the Note, the Contractor agrees that the treatment afforded to the claim of the City under any confirmed plan of reorganization shall provide that the remaining payments shall be satisfied in accordance with the Note, and that the remaining payments or claim shall not be extended or amortized over a longer period than the time remaining under the Note.

17.4.2 Should this Agreement be entered into and fully executed by the parties, and the funds have not been forwarded to Contractor, the following shall occur:

17.4.2.1 In the event the Contractor files a voluntary petition pursuant to 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303., the Contractor acknowledges that the commencement of a bankruptcy proceeding constitutes an event of default under the terms of this Agreement. Further, the Contractor acknowledges that this Agreement constitutes an executory contract within the meaning of 11 U.S.C. 365. The Contractor acknowledges that this Agreement is not capable of being assumed pursuant to 11 U.S.C. 365(c)(2), unless the City expressly consents in writing to the assumption. In the event the City consents to the assumption, the Contractor agrees to file a motion to assume this Agreement within ten (10) days after receipt of written consent from the City, regardless of whether the bankruptcy proceeding is pending under Chapter 7, 11, or 13 of Title 11 of the United States Code. The Contractor further acknowledges that this Agreement is not capable of being assigned pursuant to 11 U.S.C. 365(b)(1).

- 17.5 **Termination for Convenience:** This Agreement may be terminated for convenience in writing by City upon thirty (30) days' written notice to Contractor (delivered by certified mail, return receipt requested) of intent to terminate and the date on which such termination becomes effective. In such case, Contractor shall be paid for all work executed and expenses incurred prior to termination in addition to termination settlement costs reasonably incurred by Contractor relating to commitments which had become firm prior to the termination. Payment shall include reasonable profit for work/services satisfactorily performed. No payment shall be made for profit for work/services which have not been performed.
- 17.6 Where the Contractor's service has been so terminated by the City, the termination shall not affect any rights of the City against the Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due the Contractor by the City will not release the Contractor from liability.
- 17.7 The Contractor has no right, authority or ability to terminate the Work except for the wrongful withholding of any payments due the Contractor from the City.

ARTICLE 18 – DISPUTE RESOLUTION

- 18.1 **Resolution of Disputes:** Questions, claims, difficulties and disputes of whatever nature which may arise relative to the technical interpretation of the Contract Documents and fulfillment of this Agreement as to the character, quality, amount and value of any work done and materials furnished, or proposed to be done or furnished under, or by reason of, the Contract Documents which cannot be resolved by mutual agreement of City Project Manager and Contractor shall be submitted to the City Manager or his designee and Contractor's representative for resolution. Prior to any litigation being commenced, for any disputes which remain unresolved, within sixty (60) days after final completion of the Work, the Parties shall participate in mediation to address all unresolved disputes to a mediator agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies provided under the laws of Florida. Failure by a Party to comply in strict accordance with the requirements of this Article, then said Party specifically waives all of its rights provided hereunder, including its rights and remedies under the laws of Florida.
- 18.1.1 All non-technical administrative disputes (such as billing and payment) shall be determined by Contract Administrator.
- 18.1.2 During the pendency of any dispute and after a determination thereof, Contractor and Contract Administrator shall act in good faith to mitigate any potential damages including utilization of construction schedule changes and alternate means of construction. During the pendency of any dispute arising under this Agreement, other than termination herein, Contractor shall carry on the Work and adhere to the progress schedule. The Work shall not be delayed or postponed pending resolution of any disputes or disagreements.
- 18.1.3 For any disputes which remain unsolved, within sixty (60) calendar days after Final Completion of the Work, the Parties shall participate in mediation to address all unresolved disputes. A mediator shall be mutually agreed upon by

the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies under applicable law. If a Party objecting to a determination, fails to comply in strict accordance with the requirements of this Article, said Party specifically waives all of its rights provided hereunder, including its rights and remedies under applicable law.

ARTICLE 19 – NOTICES

19.1 All notices required by any of the Contract Documents shall be in writing and shall be deemed delivered upon mailing by certified mail, return receipt requested to the following:

To the City:

City Manager
City of Fort Lauderdale
100 North Andrews Avenue
Fort Lauderdale, Florida 33301-1016

with copy to the:

Project Manager
City of Fort Lauderdale
100 North Andrews Avenue
Fort Lauderdale, Florida 33301-1016

With copies to the:

City Attorney
City of Fort Lauderdale
100 North Andrews Avenue
Fort Lauderdale, Florida 33301-1016

To the Contractor:

Daniel D. Weekley
President
20701 Stirling Road
Pembroke Pines, FL 33332
Telephone: (954) 680-8005
E-mail: danweekley@weekleyasp.com

ARTICLE 20 – LIMITATION OF LIABILITY

20.1 The City desires to enter into this Agreement only if in so doing the City can place a limit on the City's liability for any cause of action arising out of this Agreement, so that the City's liability for any breach never exceeds the sum of \$1,000. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Contractor expresses its willingness to enter into this Agreement with the knowledge

that the Contractor's recovery from the City to any action or claim arising from the Agreement is limited to a maximum amount of \$1,000, which amount shall be reduced by the amount actually paid by the City to the Contractor pursuant to this Agreement, for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended either to be a waiver of the limitation placed upon the City's liability as set forth in Section 768.28, Florida Statutes (2022), as may be amended or revised, or to extend the City's liability beyond the limits established in said Section 768.28, Florida Statutes (2022), as may be amended or revised; and no claim or award against the City shall include attorney's fees, investigative costs, expert fees, suit costs or pre-judgment interest.

- 20.2 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

ARTICLE 21 – GOVERNING LAW; WAIVER OF JURY TRIAL

- 21.1 The Agreement shall be interpreted and construed in accordance with, and governed by, the laws of the state of Florida. The Parties agree that the exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claims arising from, related to, or in connection with this Agreement must be litigated in federal court, the Parties agree that the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY AND ALL RIGHTS EITHER PARTY MIGHT HAVE TO A TRIAL BY JURY OF ANY ISSUES RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A REQUEST FOR A JURY TRIAL IN A LAWSUIT ARISING OUT OF THIS AGREEMENT AFTER WRITTEN NOTICE BY THE OTHER PARTY OF VIOLATION OF THIS SECTION, THE PARTY MAKING THE REQUEST FOR JURY TRIAL SHALL BE LIABLE FOR THE REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY IN CONTESTING THE REQUEST FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**

ARTICLE 22 – MISCELLANEOUS

- 22.1 The duties and obligations imposed by this Agreement and the rights and remedies available to the Parties and, in particular but without limitation, the warranties, guaranties and obligations imposed upon the Contractor and all of the rights and remedies available to the City, are in addition to, and are not to be construed in any way as a limitation of,

any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents, and the provisions of this Paragraph will survive final payment and termination or completion of this Agreement.

- 22.2 The Contractor shall not assign or transfer this Agreement or its rights, title or interests. The obligations undertaken by the Contractor pursuant to this Agreement shall not be delegated or assigned to any other person or firm. Violation of the terms of this Paragraph shall constitute a material breach of Agreement by the Contractor and the City any, at its discretion, cancel this Agreement and all rights, title and interest of the Contractor which shall immediately cease and terminate.
- 22.3 The Contractor and its employees, volunteers and agents shall be and remain as independent contractor and not agents or employees of the City with respect to all of the acts and services performed by and under the terms of this Agreement. This Agreement shall not in any way be constructed to create a partnership, association or any other kind of joint undertaking or venture between the Parties.
- 22.4 The City reserves the right to audit the records of the Contractor relating in any way to the Work to be performed pursuant to this Agreement at any time during the performance and term of this Agreement and for a period of three (3) years after completion and acceptance by the City. If required by the City, the Contractor agrees to submit to an audit by an independent certified public accountant selected by the City. The Contractor shall allow the City to inspect, examine and review the records of the Contractor at any and all times during normal business hours during the term of this Agreement.
- 22.5 The remedies expressly provided in this Agreement to the City shall not be deemed to be exclusive but shall be cumulative and in addition to all other remedies in favor of the City now or later existing at law or in equity.
- 22.6 Should any part, term or provisions of this Agreement be decided by the courts to be invalid, illegal or in conflict with any state or federal law, the validity of the remaining portion or provision shall not be affected.
- 22.7 Prohibition Against Contracting With Scrutinized Companies: Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in Section 287.135, Florida Statutes (2022), as may be amended or revised. The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2022), as may be amended or revised, and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of Section 287.135, Florida Statutes (2022), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or

the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2022), as may be amended or revised, or is engaged in a boycott of Israel or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2022), as may be amended or revised.

By submitting a proposal or response, the company, principals, or owners certify that it is not listed on the Scrutinized Companies with Activities in Sudan List or listed on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is engaged in business operations in Cuba or Syria.

- 22.8 **Public Entity Crimes:** In accordance with the Public Crimes Act, Section 287.133, Florida Statutes (2022), as may be amended or revised, a person or affiliate who is a contractor, consultant or other provider, who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to the City, may not submit a bid on a contract with the City for the construction or repair of a public building or public work, may not submit bids on leases of real property to the City, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with the City, and may not transact any business with the City in excess of the threshold amount provided in Section 287.017, Florida Statutes (2022), as may be amended or revised, for category two purchases for a period of thirty-six (36) months from the date of being placed on the convicted vendor list. Violation of this section by Contractor shall result in cancellation of the City purchase and may result in Contractor debarment.
- 22.9 **Attorney Fees:** If City or Contractor incurs any expense in enforcing the terms of this Agreement or any dispute, cause of action, mediation, claim, appeal, arises regarding this agreement the prevailing Party in that litigation , dispute, cause of action, claim, mediation, or settlement shall be reimbursed for all such costs and expenses, including but not limited to court costs, reasonable attorney fees, paralegal fees, expert witness fees, appellate attorney's fees, appellate court costs, fees, mediation fees, appellate attorney's fees, and any other costs incurred incurred by the prevailing party during litigation, cause of action, mediation, appeal, claim, or dispute.

22.10 **Public Records**

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119,

Florida Statutes (2022), as may be amended or revised, or as otherwise provided by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this Agreement if the Contractor does not transfer the records to the City.
4. Upon completion of the Agreement, transfer, at no cost to the City, all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

22.12 E-Verify

As a condition precedent to the effectiveness of this Agreement, pursuant to Section 448.095, Florida Statutes (2022), as may be amended or revised, the Contractor and its subcontractors shall register with and use the E-Verify system to electronically verify the employment eligibility of newly hired employees.

1. The Contractor shall require each of its subcontractors, if any, to provide the Contractor with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The Contractor shall maintain a copy of the subcontractor's affidavit for the duration of this Agreement and in accordance with the public records requirements of this Agreement.
2. The City, the Contractor, or any subcontractor who has a good faith belief that a person or entity with which it is contracting has knowingly violated Section 448.09(1), Florida Statutes (2022), as may be amended or revised, shall terminate the Agreement with the person or entity.
3. The City, upon good faith belief that a subcontractor knowingly violated the provisions of Section 448.095(2), Florida Statutes (2022), as may be amended or revised, but that the Contractor otherwise complied with Section 448.095(2), Florida Statutes (2022), as may be amended or revised, shall promptly notify Contractor and order the Contractor to immediately terminate the contract with the subcontractor, and the Contractor shall comply with such order.
4. An Agreement terminated under Sections 448.095(2)(c)1. or 2., Florida Statutes (2022), as may be amended or revised, is not a breach of contract and may not be considered as such. If the City terminates this Agreement under Section 448.095(2)(c), Florida Statutes (2022), as may be amended or revised, the Contractor may not be awarded a public contract for at least one year after the date on which the Agreement was terminated. The Contractor is liable for any additional costs incurred by the City as a result of termination of this Agreement.

5. Contractor shall include in each of its subcontracts, if any, the requirements set forth in this section 22.11, including this subparagraph, requiring any and all subcontractors, as defined in Section 448.095(1)(j), Florida Statutes (2022), as maybe amended or revised, to include all of the requirements of this section 22.11 in its subcontracts. Contractor shall be responsible for compliance by any and all subcontractors, as defined in Section 448.095(1)(j), Florida Statutes (2022), as maybe amended or revised, with the requirements of Section 448.095, Florida Statutes (2022), as may be amended or revised.

- 22.13 The Buy American Preference. Contractor shall comply with the Buy American Preference statutory requirements and policies outlined in the in 49 USC § 50101, Executive Order 14005, Bipartisan Infrastructure Law (Pub. L. No. 117-58), and Build America, Buy America (BABA).

ARTICLE 23 – FAA REQUIRED CONTRACT PROVISIONS FOR AIRPORT CONTRACTS (AIP CONTRACTS)

- 23.1 Access to Records and Reports. The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the City, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives, access to any books, documents, papers, and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

- 23.2 Breach of Contract. Any violation or breach of terms of this contract on the part of the Contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

City will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. City reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the City elects to terminate the contract. The City's notice will identify a specific date by which the Contractor must correct the breach. Contractor may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the City's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

- 23.3 General Civil Rights Provisions. The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subtier Contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

- 23.4 **Compliance with Nondiscrimination Requirements.** During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

Non-discrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin (including English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the City or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the City or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

Sanctions for Noncompliance: In the event of a Contractor's noncompliance with the Non-discrimination provisions of this contract, the City will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

- a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
- b. Cancelling, terminating, or suspending a contract, in whole or in part.

Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the City or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the City to enter into any litigation to protect the interests of the City. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

23.5 Title VI List of Pertinent Nondiscrimination Acts and Authorities. During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and Contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990 42 USC § 12101, et seq), (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, (ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations);
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs [70 Fed. Reg. 74087 74100 (2005)];
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

23.6 Clean Air and Water Pollution Control. Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the City immediately upon discovery. The City assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds \$150,000.

23.7 Contract Workhours and Safety Standards Act Requirements

1. Overtime Requirements.

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of \$29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

- 23.8 Copeland "Anti-Kickback" Act.** Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the City, a weekly statement on the wages paid to each employee performing on covered work during the prior week. City must report any violations of the Act to the Federal Aviation Administration.

23.9 Davis-Bacon Requirements

1. Minimum Wages

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part

5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

- (ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
 - (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
 - (B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
 - (C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
 - (D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an

hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

- (iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The Federal Aviation Administration or the City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- (i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs,

the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, City, or City, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the City for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime Contractor to require a subcontractor to provide addresses and social security numbers to the prime Contractor for its own records, without weekly submission to the City.
- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;
 - (2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

- (D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- (iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the City, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the City, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines

that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
 - (iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
5. Compliance with Copeland Act Requirements
The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. **Subcontracts**
The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.
 7. **Contract Termination: Debarment**
A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.
 8. **Compliance With Davis-Bacon and Related Act Requirements.**
All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.
 9. **Disputes Concerning Labor Standards**
Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
 10. **Certification of Eligibility**
 - (i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.
- 23.10 **Texting While Driving.** In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the City encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$10,500 that involve driving a motor vehicle in performance of work activities associated with the project.

23.11 Energy Conservation Requirements. Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 *et seq.*).

23.12 Equal Opportunity Clause. During the performance of this contract, the Contractor agrees as follows:

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identify or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this section 202 of Executive Order 11246 of September 24, 1965, and shall post

copies of the notice in conspicuous places available to employees and applicants for employment.

- (5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The Contractor will the provisions of paragraphs (1) through (8) in in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

23.13 Standard Federal Equal Employment Opportunity Construction Contract Specifications

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
- d. "Minority" includes:

- (1) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000, the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation, and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period and the Contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

- n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a Contractor association, joint Contractor union, Contractor community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

23.14 Prohibition of Segregated Facilities

- (a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.
- (b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.
- (c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

23.15 Procurement of Recovered Materials. Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- (a) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or,
- (b) The Contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at

www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the Contractor can demonstrate the item is:

- (a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- (b) Fails to meet reasonable contract performance requirements; or
- (c) Is only available at an unreasonable price.

23.16 Seismic Safety. The Contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

23.17 Termination for Convenience (Construction & Equipment Contracts). The City may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of City. Upon receipt of a written notice of termination, except as explicitly directed by the City, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

- 1. Contractor must immediately discontinue work as specified in the written notice.
- 2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
- 3. Discontinue orders for materials and services except as directed by the written notice.
- 4. Deliver to the City all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.
- 5. Complete performance of the work not terminated by the notice.
- 6. Take action as directed by the City to protect and preserve property and work related to this contract that City will take possession.

City agrees to pay Contractor for:

1. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
2. Documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
3. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
4. Reasonable and substantiated expenses to the Contractor directly attributable to City's termination action.

City will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the City's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

23.18 Termination for Default. The City may, by written notice of default to the Contractor, terminate all or part of this Contract if the Contractor:

1. Fails to commence the Work under the Contract within the time specified in the Notice- to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any City approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements;
6. Becomes insolvent or declares bankruptcy;

If one or more of the stated events occur, the City will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the City's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the City, the City has authority to acquire equipment by other procurement action. The Contractor will be liable to the City for any excess costs the City incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the City shall be at the Contract price. The City may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the City determines to be necessary to protect the City against loss because of Contractor default.

City will not terminate the Contractor's right to proceed with the Work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the City, acts of another Contractor in the performance of a contract with the City, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the City determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the City issued the termination for the convenience of the City.

The rights and remedies of the City in this clause are in addition to any other rights and remedies provided by law or under this contract.

23.19 Veteran's Preference. In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier Contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

23.20 Disadvantaged Business Enterprises.

Contract Assurance - The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment - The Contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the Contractor receives from {Name of recipient}. The Contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

23.21 Contractor shall comply with the requirements of 29 CFR Part 1910. The Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 CFR Part 1910). The Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

23.22 Trade Restriction Certification.

Contractor certifies that with respect to this contract and any subcontracts it enters into, the Contractor:

- 1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);
- 2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC § 1001.

The Contractor must provide immediate written notice to the City if the Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR § 30.17, no contract shall be awarded to an Contractor or subcontractor:

- 1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR; or
- 2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
- 3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries

that discriminate against U.S. firms as published by USTR, unless the Contractor has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the City cancellation of the contract or subcontract for default at no cost to the City or the FAA.

23.23 The Contractor shall comply with the provisions of the Federal Labor Standards Act (FLSA), Section 29 CFR part 201, et seq. which are incorporated herein. The Contractor has full responsibility to monitor compliance with the FLSA. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

23.24 Lobbying.

The Contractor certifies that, to the best of its knowledge:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation; renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

23.25 Certification of Contractor Regarding Tax Delinquency and Felony Convictions.

The Contractor certifies the following provision below and will include the following provision in all of its subcontracts:

Certifications

a) The applicant represents that it is () is not (✓) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

b) The applicant represents that it is () is not (✓) a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

The following definitions apply to this section:

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. Code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 USC § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

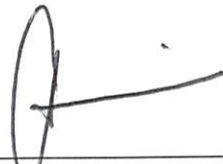
[THIS SPACE WAS INTENTIONALLY LEFT BLANK]

Fort Lauderdale Executive Airport Runway No. 9 Run-up Area Relocation
and South end Taxiways Intersection Improvements
Weekley Asphalt Paving, Inc.
Project 12708

CITY

IN WITNESS OF THE FOREGOING, the Parties have set their hands and seals the day and year first written above.

CITY OF FORT LAUDERDALE, a Florida municipal corporation

By: 
GREG CHAVARRIA
City Manager

Date: 6/23/23

ATTEST:

By: 
DAVID R. SOLOMAN
City Clerk



Approved as to Legal Form:
D'Wayne M. Spence, Interim City Attorney

By: 
SHARI WALLEN
Assistant City Attorney

CONTRACTOR

WITNESSES:

Tracie Romero

Tracie Romero
Print Name

Kelly Reed

Kelly Reed
Print Name

(CORPORATE SEAL)

STATE OF Florida :

COUNTY OF Broward :

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 7 day of March, 2023, by Daniel D Weekley, (NAME OF AUTHORIZED OFFICER) as President (TITLE OF AUTHORIZED OFFICER), for WEEKLEY ASPHALT PAVING, INC., a Florida corporation.



KIMBERLY A. CALLEN
Commission # HH 294154
Expires July 27, 2026

Kimberly A. Callen
(Signature of Notary Public - State of Florida)

Kimberly A. Callen
(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known X OR Produced Identification _____
Type of Identification Produced: _____

SURETY BOND

IN COMPLIANCE WITH AND INCORPORATING THE PROVISIONS OF SECTION 255.05, FLORIDA STATUTES

THIS IS A SURETY BOND given by Weekley Asphalt Paving, Inc. the "Contractor" as principal, referred to in this Bond as "Contractor" and Western Surety Company as "Surety," and they represent by this instrument that they are bound to the CITY OF FORT LAUDERDALE, a municipal corporation of the State of Florida ("City"), in the sum of \$3,979,833.25 (Three Million, Nine Hundred Seventy-Nine Thousand, Eight Hundred and Thirty-Three Dollars, Twenty-Five Cents) for the payment of which, to be made to the City of Fort Lauderdale, Florida, they jointly and severally, bind themselves and each of their heirs, executors, administrators, successors and assigns.

Owner Name: CITY OF FORT LAUDERDALE
a municipal corporation of the State of Florida

Owner Address and Telephone: City Hall, Public Works Department
100 N. Andrews Avenue
Fort Lauderdale, Florida 33301
(954) 828-5772

Bond No.: 30127280 Issued in Duplicate

Contractor Name, Address, Telephone: Weekley Asphalt Paving, Inc.
20701 Stirling Road
Pembroke Pines, FL 33332
(954) 680-8005

Surety Company, Address, Telephone: Western Surety Company
151 N. Franklin Street
Chicago, IL 60606
(312) 822-5000

City Project No./Bid No.: 12708; 12679-623

Name of Project: Fort Lauderdale Executive Airport Runway 9 Run-up Area
Relocation & South End Taxiway Intersection Improvements

Project Location: Fort Lauderdale Executive Airport

Legal Description and Street Address: Fort Lauderdale, Florida

Description of Work: The work includes, but is not limited to, relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage. The project also includes the re-alignment of taxiways Echo and Juliet on the southern end of Runway 9. The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping and sodding, as well as installation of LED edge-lights and guidance signs.

"Contractor" is bound by an instrument in writing dated the 21st day of February, 2023, by which Contractor has contracted with the City of Fort Lauderdale, Florida, to furnish labor, tools, and materials for the Project referenced and described above, together with all work incidental thereto, as fully set out in the plans, specifications and details on file in the Office of the City Engineer of the City.

SB-1

255.05 Bond Form, Rev. 10/21/05



I hereby certify this document to be a true, correct and complete copy of the record filed in my office.
Dated this 23 day of March, 2023 County Administrator.
By: Broward County Deputy Clerk
13b8c439-c04a-4f55-8d4d-f8a51c83c220 Page 1 of 3

(2)

Notice required by Section 255.05(6), Florida Statutes: "This bond is given to comply with Section 255.05 Florida Statutes, and any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes."

The condition of the above obligation is such that if the above bound "Contractor," or its successor or assigns shall in good faith and in good, sufficient, substantial and workmanlike manner, perform the work and comply with the conditions of the contract, including payment of penalties, in strict accordance with the terms and provisions stipulated in it and shall indemnify and hold harmless the City against and for payments of any and all damages that may happen to persons or property by reason of excavations, embankments, obstructions and all other work in streets, alleys or places in connection with the work, or arising out of any act, neglect or omission of the "Contractor" or its agents, servants, or employees with relation to the work, and shall indemnify and hold harmless the City against and from all suits and acts of every nature and description arising out of any claims by patentees of any process connected with the work agreed to be performed under the contract, or of any materials used upon the work, and pay all costs accruing if the contract is cancelled and a new contract for finishing the work is let, and all other expenses lawfully chargeable to the "Contractor," then this agreement shall be null and void; otherwise it is to remain in full force and effect, but it is expressly provided, understood and agreed that if the "Contractor" or its subcontractors fail to duly and promptly pay for any labor, material, or other supplies used by "Contractor" or any of its subcontractors in the performance of the work to be done, or the Contractor defaults in its Contract with the City, the "Surety" will promptly pay to all claimants, as defined in Section 255.05(1), Florida Statutes, the same in an amount not exceeding the sum specified in this bond, together with interest at the rate of fifteen percent (15%) per annum, and the Surety hereby stipulates and agrees that no change, extension, reduction, alteration or addition to the terms of the contract or the plans, details and specifications shall in any way affect the obligations of this bond.

Whenever Contractor shall be, and is declared by the City to be in default under the contract, the City may proceed to cancel the contract and award a new contract for finishing the work or order the Surety to promptly remedy the default by obtaining a bid or bids for completing the contract in accordance with the original contract terms and conditions. Upon the determination by the City of the lowest responsible bidder, the Surety shall complete all work and pay the full cost of completion, less previous payments.

This Bond is effective for one (1) year after completion and acceptance of the work, with liability equal to twenty-five percent (25%) of the contract price, and is so conditioned that the "Contractor" will, at its own expense, correct any defective or faulty work or material which appears within one (1) year after completion of the work and final payment, upon notification by the City.

IN WITNESS WHEREOF, the above "Contractor" has signed this Agreement, and the "Surety" has caused this Agreement to be signed in its name by its Attorney-in-Fact, and its corporate seal affixed, this 1st day of March, 2023.

Signed, sealed and delivered
in the presence of:

(Witness) Signature

Wayne D. Weekley, Secretary
(Witness) Print Name

(Witness) Signature

Salvatore Cardinale
(Witness) Print Name

CONTRACTOR: Weekley Asphalt Paving, Inc.

Daniel D. Weekley, President
Print Name and Title

SURETY: Western Surety Company

Anett Cardinale, Attorney in Fact
FL Licensed Resident Agent
Print Name and Title

SB-2

255.05 Bond Form, Rev. 10/21/05



I hereby certify this document to be a true, correct and complete copy of the record filed in my office.
Dated this 23 day of March, 2023 County Administrator.
By: Broward County Deputy Clerk
13b8c439-c04a-4f55-8d4d-f8a51c83c220 Page 2 of 3

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Anett Cardinale, Radha R Jones, Alexa Diaz, Sandra B Lazogue, Jennifer Bernard, Individually

of Tampa, FL, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 5th day of July, 2022.



WESTERN SURETY COMPANY

Paul T. Bruflat
Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha

} ss

On this 5th day of July, 2022, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires

March 2, 2026



M. Bent
M. Bent, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 1st day of March, 2023.



WESTERN SURETY COMPANY

L. Nelson
L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligor Services > Validate Bond Coverage, If you want to verify bond authenticity.



I hereby certify this document to be a true, correct and complete copy of the record filed in my office.

Dated this 23 day of March, 2023 County Administrator.

By: Broward County Deputy Clerk

13b8c439-c04a-4f55-8d4d-f8a51c83c220 Page 3 of 3

SURETY BOND

IN COMPLIANCE WITH AND INCORPORATING THE PROVISIONS OF SECTION 255.05, FLORIDA STATUTES

THIS IS A SURETY BOND given by Weekley Asphalt Paving, Inc. the "Contractor" as principal, referred to in this Bond as "Contractor" and Western Surety Company as "Surety," and they represent by this instrument that they are bound to the CITY OF FORT LAUDERDALE, a municipal corporation of the State of Florida ("City"), in the sum of \$3,979,833.25 (Three Million, Nine Hundred Seventy-Nine Thousand, Eight Hundred and Thirty-Three Dollars, Twenty-Five Cents) for the payment of which, to be made to the City of Fort Lauderdale, Florida, they jointly and severally, bind themselves and each of their heirs, executors, administrators, successors and assigns.

Owner Name: CITY OF FORT LAUDERDALE
a municipal corporation of the State of Florida

Owner Address and Telephone: City Hall, Public Works Department
100 N. Andrews Avenue
Fort Lauderdale, Florida 33301
(954) 828-5772

Bond No.: 30127280 Issued in Duplicate

Contractor Name, Address, Telephone: Weekley Asphalt Paving, Inc.
20701 Stirling Road
Pembroke Pines, FL 33332
(954) 680-8005

Surety Company, Address, Telephone: Western Surety Company
151 N. Franklin Street
Chicago, IL 60608
(312) 822-5000

City Project No./Bid No.: 12708; 12679-623
Name of Project: Fort Lauderdale Executive Airport Runway 9 Run-up Area
Relocation & South End Taxiway Intersection Improvements

Project Location: Fort Lauderdale Executive Airport
Legal Description and Street Address: Fort Lauderdale, Florida
Description of Work: The work includes, but is not limited to, relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage. The project also includes the re-alignment of taxiways Echo and Juliet on the southern end of Runway 9. The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping and sodding, as well as installation of LED edge-lights and guidance signs.

"Contractor" is bound by an instrument in writing dated the 21st day of February, 2023, by which Contractor has contracted with the City of Fort Lauderdale, Florida, to furnish labor, tools, and materials for the Project referenced and described above, together with all work incidental thereto, as fully set out in the plans, specifications and details on file in the Office of the City Engineer of the City.

SB-1

255.05 Bond Form, Rev. 10/21/05



I hereby certify this document to be a true, correct and complete copy of the record filed in my office.
Dated this 23 day of March, 2023 County Administrator.
By: Broward County Deputy Clerk
13b8c439-c04a-4f55-8d4d-f8a51c83c220 Page 1 of 3

(2)

Notice required by Section 255.05(6), Florida Statutes: "This bond is given to comply with Section 255.05 Florida Statutes, and any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes."

The condition of the above obligation is such that if the above bound "Contractor," or its successor or assigns shall in good faith and in good, sufficient, substantial and workmanlike manner, perform the work and comply with the conditions of the contract, including payment of penalties, in strict accordance with the terms and provisions stipulated in it and shall indemnify and hold harmless the City against and for payments of any and all damages that may happen to persons or property by reason of excavations, embankments, obstructions and all other work in streets, alleys or places in connection with the work, or arising out of any act, neglect or omission of the "Contractor" or its agents, servants, or employees with relation to the work, and shall indemnify and hold harmless the City against and from all suits and acts of every nature and description arising out of any claims by patentees of any process connected with the work agreed to be performed under the contract, or of any materials used upon the work, and pay all costs accruing if the contract is cancelled and a new contract for finishing the work is let, and all other expenses lawfully chargeable to the "Contractor," then this agreement shall be null and void; otherwise it is to remain in full force and effect, but it is expressly provided, understood and agreed that if the "Contractor" or its subcontractors fail to duly and promptly pay for any labor, material, or other supplies used by "Contractor" or any of its subcontractors in the performance of the work to be done, or the Contractor defaults in its Contract with the City, the "Surety" will promptly pay to all claimants, as defined in Section 255.05(1), Florida Statutes, the same in an amount not exceeding the sum specified in this bond, together with interest at the rate of fifteen percent (15%) per annum, and the Surety hereby stipulates and agrees that no change, extension, reduction, alteration or addition to the terms of the contract or the plans, details and specifications shall in any way affect the obligations of this bond.

Whenever Contractor shall be, and is declared by the City to be in default under the contract, the City may proceed to cancel the contract and award a new contract for finishing the work or order the Surety to promptly remedy the default by obtaining a bid or bids for completing the contract in accordance with the original contract terms and conditions. Upon the determination by the City of the lowest responsible bidder, the Surety shall complete all work and pay the full cost of completion, less previous payments.

This Bond is effective for one (1) year after completion and acceptance of the work, with liability equal to twenty-five percent (25%) of the contract price, and is so conditioned that the "Contractor" will, at its own expense, correct any defective or faulty work or material which appears within one (1) year after completion of the work and final payment, upon notification by the City.

IN WITNESS WHEREOF, the above "Contractor" has signed this Agreement, and the "Surety" has caused this Agreement to be signed in its name by its Attorney-in-Fact, and its corporate seal affixed, this 1st day of March, 2023.

Signed, sealed and delivered
in the presence of:

(Witness) Signature

Wayne D. Weekley, Secretary
(Witness) Print Name

(Witness) Signature

Salvatore Cardinale
(Witness) Print Name

CONTRACTOR: Weekley Asphalt Paving, Inc.

Daniel D. Weekley, President
Print Name and Title

SURETY: Western Surety Company

Anett Cardinale, Attorney in Fact
FL Licensed Resident Agent
Print Name and Title

SB-2

255.05 Bond Form, Rev. 10/21/05



I hereby certify this document to be a true, correct and complete copy of the record filed in my office.
Dated this 23 day of March, 2023 County Administrator.

By: Broward County Deputy Clerk
13b8c439-c04a-4f55-8d4d-f8a51c83c220 Page 2 of 3

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Anett Cardinale, Radha R Jones, Alexa Diaz, Sandra B Lazogue, Jennifer Bernard, Individually

of Tampa, FL, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 5th day of July, 2022.



WESTERN SURETY COMPANY

Paul T. Brufat

Paul T. Brufat, Vice President

State of South Dakota
County of Minnehaha

} ss

On this 5th day of July, 2022, before me personally came Paul T. Brufat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires

March 2, 2026



M. Bent

M. Bent, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 1st day of March, 2023.



WESTERN SURETY COMPANY

L. Nelson

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligor Services > Validate Bond Coverage, if you want to verify bond authenticity.



I hereby certify this document to be a true, correct and complete copy of the record filed in my office.
Dated this 23 day of March, 2023 County Administrator.
By: Broward County Deputy Clerk
13b8c439-c04a-4f55-8d4d-f8a51c83c220 Page 3 of 3



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
3/28/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | |
|---|---|------------------------------------|
| PRODUCER Commercial Lines - (305) 443-4886 USI Insurance Services LLC 201 Alhambra Circle, Suite 1205 Coral Gables, FL 33134 | CONTACT NAME: Francys Tolon PHONE (A/C, No, Ext): 786.785.1126 E-MAIL ADDRESS: francys.tolon@usi.com | FAX (A/C, No): 786.264.9232 |
| | INSURER(S) AFFORDING COVERAGE | |
| INSURED Weekley Asphalt Paving, Inc. 20701 Stirling Road Pembroke Pines FL 33332 | INSURER A: Old Republic Insurance Company | |
| | INSURER B: Underwriters at Lloyds, London (IL) | |
| | INSURER C: AGCS Marine Insurance Company | |
| | INSURER D: Axis Surplus Insurance Company | |
| | INSURER E: | |
| INSURER F: | | NAIC # 24147 |

COVERAGES **CERTIFICATE NUMBER:** 15704609 **REVISION NUMBER:** See below

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL SUBR INSD WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|---|--------------------|---------------|-------------------------|-------------------------|--|
| A | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER: | X | MWZY31242623 | 3/1/2023 | 3/1/2024 | EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 |
| A | AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY | | MWTB31242523 | 3/1/2023 | 3/1/2024 | COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ |
| B | <input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$ | | SCX1011423 | 3/1/2023 | 3/1/2024 | EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$ |
| A | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below | Y/N Y | MWC31242723 | 3/1/2023 | 3/1/2024 | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000 |
| C | Leased & Rented Equipment | | MXI93071287 | 3/1/2023 | 3/1/2024 | L&R Equipment \$200,000 Deductible \$5,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Bid No: 12679-623 - City Project No. 12708 - FXE Runway 9 Run-up Area Relocation and SouthEnd Taxiway Intersection Improvements

City of Fort Lauderdale is listed as an additional insured with respects to the general liability policy. Waiver of subrogation applies in favor of the City of Fort Lauderdale with respects to the workers compensation coverage.

CERTIFICATE HOLDER

City of Fort Lauderdale
 100 N Andrews Avenue
 Fort Lauderdale, FL 33301

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ACORD 25 (2016/03)

(This certificate replaces certificate 15695595 issued on 2/23/2023)

Certificate of Insurance (Con't)

OTHER Coverage

| INSR LTR | TYPE OF INSURANCE | ADDL INSR | WVD SUBR | POLICY NUMBER | EFFECTIVE DATE (MM/DD/YY) | EXPIRATION DATE (MM/DD/YY) | LIMIT |
|-------------|-------------------|--------------|-------------|-----------------|------------------------------|-------------------------------|--|
| D | Excess Liability | | | P00100078246702 | 3/1/2023 | 3/1/2024 | 3,000,000 Each Occurrence 3,000,000 Aggregate |

From: Alisha Auth
To: Maureen Lewis
Cc: Matthew Cobb
Subject: RE: 12679-623: FXE Airport Runway 9 Run-Up Area Relocation et. al - P12708 (Insurance & Surety Bond Review) FOLLOW-UP
Date: Thursday, May 4, 2023 9:11:02 AM
Attachments: [12679-623 FINAL Exhibit 3 - Agreement 2-21-2023.pdf](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[12679-623 Insurance 3-28-2023.pdf](#)
[12679-623 Recorded bond 4-24-2023.pdf](#)
[12679-623 Insurance & Surety approval form to Risk.doc](#)

Hi Maureen,

The only insurance coverage missing is the professional liability requirement. Everything else is good to go.

Thank you.

Alisha Auth, ARM, AIC

City of Fort Lauderdale | Human Resources Department | Risk Management Division
100 N. Andrews Avenue, 3rd Floor | Fort Lauderdale, Florida 33301
Email: aauth@fortlauderdale.gov | Phone: (954) 828-5179 | Fax: (954) 828-5439

#WeAreFTL

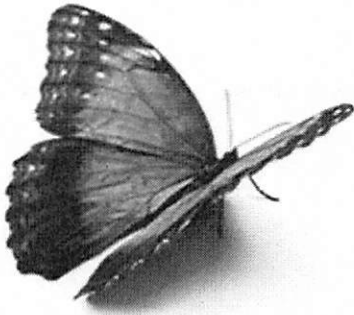
The City of Fort Lauderdale is a public entity subject to Chapter 119 of the Florida Statutes concerning public records. Email messages to and from employees or officials are covered under such laws and thus subject to public disclosure.

From: Maureen Lewis <MLewis@fortlauderdale.gov>
Sent: Wednesday, May 3, 2023 9:35 AM
To: Alisha Auth <AAAuth@fortlauderdale.gov>
Cc: Matthew Cobb <MCobb@fortlauderdale.gov>
Subject: FW: 12679-623: FXE Airport Runway 9 Run-Up Area Relocation et. al - P12708 (Insurance & Surety Bond Review) FOLLOW-UP

Good morning Alisha,
Please provide an update on this. Thanks.

Maureen Lewis MBA, CPPB | Senior Procurement Specialist

City of Fort Lauderdale | Procurement Services Division
100 N. Andrews Ave. | Fort Lauderdale FL 33301
P (954) 828-5239 | F (954) 828-5576 | maureenl@fortlauderdale.gov
Accountability – Ethics – Impartiality – Professionalism – Service – Transparency



In everything, give thanks!!



ARE YOU **COMPETING FOR CITY BUSINESS?** [CLICK HERE TO REGISTER IN OUR NEW PROCUREMENT SOFTWARE SYSTEM.](#)

From: Maureen Lewis

Sent: Monday, April 24, 2023 4:57 PM

To: Alisha Auth <AAAuth@fortlauderdale.gov>

Subject: 12679-623: FXE Airport Runway 9 Run-Up Area Relocation et. al - P12708 (Insurance & Surety Bond Review)

Please see attached for your review and approval. The insurance requirements start on Page 18.
Thanks.

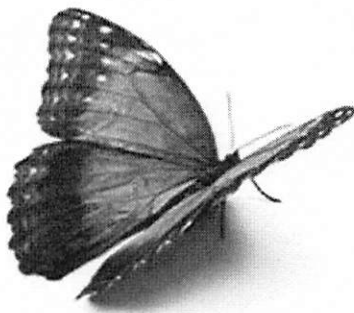
Maureen Lewis MBA, CPPB | Senior Procurement Specialist

City of Fort Lauderdale | Procurement Services Division

100 N. Andrews Ave. | Fort Lauderdale FL 33301

P (954) 828-5239 | F (954) 828-5576 | maureenl@fortlauderdale.gov

Accountability – Ethics – Impartiality – Professionalism – Service – Transparency



From: Alisha Auth
To: Maureen Lewis
Cc: Matthew Eaton; Khant Myat; Guy Hine; Matthew Cobb
Subject: RE: Weekley Asphalt [12679-623: FXE Airport Runway 9 Run-up Area Relocation] - PROFESSIONAL LIABILITY INSURANCE - UPDATED
Date: Tuesday, May 9, 2023 3:10:58 PM
Attachments: [12679-623 FINAL Exhibit 3 - Agreement 2-21-2023.pdf](#)
[image003.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[RE 12679-623 FXE Airport Runway 9 Run-Up Area Relocation et. al - P12708 \(Insurance Surety Bond Review\) FOLLOW-UP.msg](#)

Hi Maureen,

Based upon the project description on page 4, I do not see that there any design elements to this agreement. As such, professional liability would not be required and should be removed from the contract.

Thank you.

Alisha Auth, ARM, AIC

City of Fort Lauderdale | Human Resources Department | Risk Management Division
100 N. Andrews Avenue, 3rd Floor | Fort Lauderdale, Florida 33301
Email: aauth@fortlauderdale.gov | Phone: (954) 828-5179 | Fax: (954) 828-5439

#WeAreFTL

The City of Fort Lauderdale is a public entity subject to Chapter 119 of the Florida Statutes concerning public records. Email messages to and from employees or officials are covered under such laws and thus subject to public disclosure.

From: Maureen Lewis <MLewis@fortlauderdale.gov>

Sent: Tuesday, May 9, 2023 2:43 PM

To: Alisha Auth <AAAuth@fortlauderdale.gov>

Cc: Matthew Eaton <MEaton@fortlauderdale.gov>; Khant Myat <KMyat@fortlauderdale.gov>; Guy Hine <GHine@fortlauderdale.gov>

Subject: FW: Weekley Asphalt [12679-623: FXE Airport Runway 9 Run-up Area Relocation] - PROFESSIONAL LIABILITY INSURANCE - UPDATED

Correction:

SOW is on Pg. 4 under Project Description.

Maureen Lewis MBA, CPPB | Senior Procurement Specialist

City of Fort Lauderdale | Procurement Services Division

100 N. Andrews Ave. | Fort Lauderdale FL 33301

P (954) 828-5239 | F (954) 828-5576 | maureenl@fortlauderdale.gov

Accountability – Ethics – Impartiality – Professionalism – Service – Transparency

Bid #12679-623
Lot: BASE BID


FXE Runway 9 Run-up Area Relocation & SouthEnd Taxiway Intersection Improvements

| | | | | WEEKLEY ASPHALT PAVING INC. | |
|------------------|---|-------|--------|-----------------------------|----------------|
| Item # | Item | Qty | Unit | Price | Total |
| 12679-623-01-01 | CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1) | 1 | ls | 81995 | 81995 |
| 12679-623-01-02 | TEMPORARY AIR AND WATER POLLUTION SOIL EROSION AND SILTATION CONTROL (C-102-5.1) | 1 | ls | 23400 | 23400 |
| 12679-623-01-03 | MOBILIZATION (C-105-6.1) | 1 | ls | 301160 | 301160 |
| 12679-623-01-04 | AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC (S-102-5.1) | 1 | ls | 350000 | 350000 |
| 12679-623-01-05 | TEMPORARY FENCE FOR OWL TORTOISE NESTS (S-102-5.2) | 10 | ea | 800 | 8000 |
| 12679-623-01-06 | PROJECT SURVEY AND STAKEOUT (S-103-5.1) | 1 | ls | 79890 | 79890 |
| 12679-623-01-07 | BLAST FENCE (S-108-5.1) | 1 | ls | 174260 | 174260 |
| 12679-623-01-08 | FULL DEPTH ASPHALT PAVEMENT REMOVAL (P-101-5.1) | 9500 | sy | 10.17 | 96615 |
| | Quantity for above item reduced from 9500 sy to 8500 sy | -1000 | sy | 10.17 | -10170 |
| 12679-623-01-09 | BITUMINOUS PAVEMENT MILLING (MAX 2 IN) (P-101-5.2) | 4780 | sy | 5 | 23900 |
| 12679-623-01-10 | ASPHALT PAVEMENT SURFACE REMOVAL (P-101-5.3) | 4720 | sy | 6.5 | 30680 |
| 12679-623-01-11 | CONCRETE FOUNDATION REMOVAL (P-101-5.4) | 430 | sy | 39 | 16770 |
| 12679-623-01-12 | ASPHALT PAVEMENT REMOVAL AND PARTIAL LIMEROCK REMOVAL (P-101-5.5) | 1230 | sy | 8 | 9840 |
| 12679-623-01-13 | CRACK SEALING (P-101-5.6) | 3000 | lf | 9 | 27000 |
| 12679-623-01-14 | REMOVAL SALVAGE AND RELOCATION OF NON ELECTRICAL AIRPORT SIGNAGE (P-101-5.7) | 8 | ea | 667 | 5336 |
| 12679-623-01-15 | BLAST FENCE REMOVAL (P-101-5.8) | 1 | ls | 12890 | 12890 |
| 12679-623-01-16 | UNCLASSIFIED EXCAVATION (P-152-4.1) | 4200 | cy | 36 | 151200 |
| 12679-623-01-17 | EMBANKMENT (P-152-4.2) | 2000 | cy | 27.6 | 55200 |
| 12679-623-01-18 | UTILITY SOFT DIG (P-152-4.3) | 1 | ls | 4450 | 4450 |
| 12679-623-01-19 | SUBBASE COURSE (12 IN THICK) (P-154-5.1) | 9800 | sy | 6.16 | 60368 |
| 12679-623-01-20 | SUBBASE COURSE SHOULDER (6 IN THICK) (P-154-5.2) | 8020 | sy | 5.5 | 44110 |
| 12679-623-01-21 | LIME ROCK BASE COURSE (9 IN THICK) (P-211-5.1) | 11800 | sy | 28.48 | 336064 |
| | Quantity for above item reduced from 11600 sy to 11200 sy | -600 | sy | 28.48 | -17088 |
| 12679-623-01-22 | LIME ROCK BASE COURSE (VARIABLE THICKNESS 0 IN TO 4 IN THICK) (P-211-5.3) | 4710 | sy | 11.67 | 54965.7 |
| 12679-623-01-23 | LIME ROCK TRANSITION WEDGE (P-211-5.4) | 2200 | lf | 1 | 2200 |
| 12679-623-01-24 | HOT MIXED ASPHALT PAVEMENT (SURFACE) (P-401-8.1) | 4500 | ton | 168.5 | 758250 |
| | Quantity for above item reduced from 4500 ton to 4355 ton | -145 | ton | 168.5 | -24432.5 |
| 12679-623-01-25 | HOT MIXED ASPHALT PAVEMENT (LEVELING) (P-403-8.1) | 350 | ton | 190 | 66500 |
| 12679-623-01-26 | PRIME COAT (P-602-5.1) | 4950 | gallon | 0.01 | 49.5 |
| 12679-623-01-27 | TACK COAT (P-603-5.1) | 2520 | gallon | 6.5 | 16380 |
| 12679-623-01-28 | REINFORCED CONCRETE FOUNDATION FOR BLAST FENCE (P-610-6.1) | 225 | cy | 800 | 180000 |
| 12679-623-01-29 | PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS (YELLOW WHITE) (P-620-5.1) | 7920 | sf | 4 | 31680 |
| 12679-623-01-30 | PERMANENT AIRFIELD PAINTING WITH TYPE I GLASS BEADS (RED) (P-620-5.2) | 850 | sf | 4.2 | 3570 |
| 12679-623-01-31 | PERMANENT AIRFIELD PAINTING WITH NO GLASS BEADS (BLACK) (P-620-5.3) | 14550 | sf | 1.4 | 20370 |
| 12679-623-01-32 | TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS (YELLOW WHITE) (P-620-5.4) | 7920 | sf | 1.9 | 15048 |
| 12679-623-01-33 | TEMPORARY AIRFIELD PAINTING WITH NO GLASS BEADS (RED) (P-620-5.5) | 850 | sf | 3.7 | 3145 |
| 12679-623-01-34 | AIRFIELD PAINT REMOVAL (P-620-5.6) | 650 | sf | 4.5 | 2925 |
| 12679-623-01-35 | SODDING (T-904-5.1) | 8720 | sy | 9 | 78480 |
| 12679-623-01-36 | HYDROSEEDING (S-906-5.1) | 14790 | sy | 5.95 | 88000.5 |
| 12679-623-01-37 | HAND EXCAVATE MINIMUM 8 IN WIDE X 28 IN DEEP IN EARTH (L-108-5.1) | 25 | lf | 16.7 | 417.5 |
| 12679-623-01-38 | SAWCUT HAND EXCAVATE MIN 8 IN WIDE 28 IN DEEP IN EXIST FULL PAVEMENT (L-108-5.2) | 25 | lf | 22.25 | 556.25 |
| 12679-623-01-39 | 3 QUARTER IN X 10 FT GROUND RODS CONNECTED TO COUNTERPOISE (L-108-5.3) | 26 | ea | 278 | 7228 |
| 12679-623-01-40 | 10 FT ADDITIONAL GROUND ROD SECTIONS (L-108-5.4) | 26 | ea | 100 | 2600 |
| 12679-623-01-41 | NO6 BRE SLD AWC POISE COND INSTALLED OVER CONDUIT SYSTEM (L-108-5.5) | 7300 | lf | 0.9 | 6570 |
| 12679-623-01-42 | NO8 SKV L-824 COND INSTAL IN NEW AND EXIST CONDUIT DUCTBANK SYSTEM (L-108-5.6) | 13900 | lf | 2.12 | 29468 |
| 12679-623-01-43 | 1 2IN SCHED 40 PVCCOND NON ENCL DB IN EARTH 24IN MIN CVR CMPLT IN PLACE (L-110-5.1) | 6400 | lf | 11.15 | 71360 |
| 12679-623-01-44 | 1 2IN SCHED 40 PVCCOND CONC ENCL INST IN NEW FULL STRENGTH PVMT 24IN MIN CVR CMPLT IN PLACE (L-110-5.2) | 975 | lf | 35.6 | 34710 |
| 12679-623-01-45 | 1 2IN SCHED 40 PVCCOND CONC ENCL INST IN EXIST FULL STRENGTH PVMT 24IN MIN CVR CMPLT IN PLACE (L-110-5.3) | 95 | lf | 33.4 | 3173 |
| 12679-623-01-46 | INTERCEPT EXIST CONDUIT SYSTEM AND CONNECT TO NEW CONDUIT SYSTEM (L-110-5.4) | 20 | ea | 39 | 780 |
| 12679-623-01-47 | HAND EXCAVATE AND CONCRETE ENCASE EXIST 1W2 IN CONDUIT COMPLETE (L-110-5.5) | 550 | lf | 31.15 | 17132.5 |
| 12679-623-01-48 | HAND EXCAVATE AND CONCRETE ENCASE EXIST 2W4 IN CONDUIT COMPLETE (L-110-5.6) | 110 | lf | 44.5 | 4895 |
| 12679-623-01-49 | L 867 16 IN DIAMETER JUNCTION CAN WITH COVER INSTALLED IN EARTH (L-115-5.1) | 1 | ea | 1778 | 1778 |
| 12679-623-01-50 | L 867 16 IN DIAMETER BOTTOMLESS 2 CAN JCP INSTALL IN EARTH (L-115-5.2) | 2 | ea | 8334 | 16668 |
| 12679-623-01-51 | INTER EXIST LIGHT CAN IN EARTH EXIST PVEMNT CONNECT TO CONDUIT SYSTEM (L-115-5.3) | 5 | ea | 289 | 1445 |
| 12679-623-01-52 | REMOV OF EXIST JC LIGHT BASE CAN IN EARTH COMPLETE (L-115-5.4) | 110 | ea | 28 | 3080 |
| 12679-623-01-53 | REMOV OF EXIST JC LIGHT BASE CAN IN EXISTING PAVEMENT COMPLETE (L-115-5.5) | 9 | ea | 61.2 | 550.8 |
| 12679-623-01-54 | REMOVAL OF EXISTING 2 CAN JUNCTION CAN PLAZA IN EARTH COMPLETE (L-115-5.6) | 1 | ea | 139 | 139 |
| 12679-623-01-55 | L8617(L) LED TAXI ELEV EDGE LIGHT AND NEW BASE INSTAL IN EARTH (L-125-5.1) | 30 | ea | 2778 | 83340 |
| 12679-623-01-56 | RELO L8617(L) LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN EARTH (L-125-5.2) | 95 | ea | 2667 | 253365 |
| 12679-623-01-57 | RELO L8617(L) LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN NEW PVMT (L-125-5.3) | 5 | ea | 1945 | 9725 |
| 12679-623-01-58 | RELO L8617(L) LED TAXI ELEV EDGE LIGHT WITH NEW BC INSTAL IN EXIST PVMT (L-125-5.4) | 4 | ea | 2000 | 8000 |
| 12679-623-01-59 | RELO L852(L) LED FLUSH RGL WITH NEW 2 PC L868 BC INSTAL IN NEW PAVEMENT (L-125-5.5) | 6 | ea | 2780 | 16680 |
| 12679-623-01-60 | RELO L804(L) LED ELEVATED RGL WITH NEW BASE CAN INSTALLED IN EARTH (L-125-5.6) | 2 | ea | 1945 | 3890 |
| 12679-623-01-61 | L858(L) SIZE 1 3 TO 4 CHAR LED GUIDE SIGN AND CONC BASE INSTAL IN EARTH (L-125-5.7) | 2 | ea | 10223 | 20446 |
| 12679-623-01-62 | L858(L) SIZE 1 5 TO 6 CHAR LED GUIDE SIGN AND CONC BASE INSTAL IN EARTH (L-125-5.8) | 1 | ea | 12667 | 12667 |
| 12679-623-01-63 | L858(L) SIZE 1 7 TO 8 CHAR LED GUIDE SIGN AND CONC BASE INSTAL IN EARTH (L-125-5.9) | 1 | ea | 14328 | 14328 |
| 12679-623-01-64 | L858(L) SIZE 1 3 TO 4 CHAR LED GUIDE SIGN AND CONC BASE INSTAL IN NEW PVMT (L-125-5.10) | 1 | ea | 10223 | 10223 |
| 12679-623-01-65 | REPAIR L858(L) SIZE 1 2 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANELS (L-125-5.1) | 1 | ea | 100 | 100 |
| 12679-623-01-66 | REPAIR L858(L) SIZE 1 3 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANELS (L-125-5.2) | 2 | ea | 135 | 270 |
| 12679-623-01-67 | RELO L858(L) SIZE 1 2 MOD LED GUIDE SIGN WITH NEW CONC BASE INST EARTH (L-125-5.13) | 7 | ea | 7223 | 50561 |
| 12679-623-01-68 | RELO L858(L) SIZE 1 3 MOD LED GUIDE SIGN WITH NEW CONC BASE INST EARTH (L-125-5.14) | 5 | ea | 11778 | 58890 |
| 12679-623-01-69 | RELO L858(L) SIZE 1 4 MOD LED GUIDE SIGN WITH NEW CONC BASE INST EARTH (L-125-5.15) | 2 | ea | 10556 | 21112 |
| 12679-623-01-70 | REMOVE EXIST GUIDE SIGN AND CONC BASE IN EARTH EXIST PAVEMNT COMP (L-125-5.16) | 16 | ea | 339 | 5424 |
| 12679-623-01-71 | REMOVAL OF EXISTING OBSTRUCTION LIGHTING SYSTEM COMPLETE (L-125-5.17) | 1 | ea | 834 | 834 |
| 12679-623-01-72 | INTER EXIST CIRC COND IN EXIST BC MH JC AND EXTND CIRC ACCORDINGLY (L-125-5.18) | 13 | ea | 212 | 2756 |
| 12679-623-01-73 | IDENT OF CABLE DUCTBANK AND LIGHT FIXTURES PER FAA SPECS (L-125-5.19) | 1 | ls | 38890 | 38890 |
| 12679-623-01-74 | INSTALLATION OF ALL ACNT ALCMS GRAPHIC UPDATES COMPLETE (L-125-5.20) | 1 | ls | 2780 | 2780 |
| BASE TOTAL | | | | | \$3,979,833.25 |
| Allowance: | | | | | 18,500 |
| ALTERNATES | | | | | |
| 12679-623-02-01 | CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1) | 1 | ls | 2000 | 2000 |
| 12679-623-02-02 | TEMPORARY AIR WATER POLLUTION SOIL EROSION AND SILTATION CONTROL (C-102-5.1) | 1 | ls | 2000 | 2000 |
| 12679-623-02-03 | MOBILIZATION (C-105-6.1) | 1 | ls | 5000 | 5000 |
| 12679-623-02-04 | AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC (S-102-5.1) | 1 | ls | 5000 | 5000 |
| 12679-623-02-05 | PROJECT SURVEY AND STAKEOUT (S-103-5.1) | 1 | ls | 4000 | 4000 |
| 12679-623-02-06 | UNCLASSIFIED EXCAVATION (P-152-4.1) | 500 | cy | 36 | 18000 |
| 12679-623-02-07 | EMBANKMENT (P-152-4.2) | 200 | cy | 35 | 7000 |
| 12679-623-02-08 | LIME ROCK BASE COURSE (6 IN THICK) (P-211-5.2) | 605 | sy | 19.6 | 11858 |
| 12679-623-02-09 | HOT MIXED ASPHALT PAVEMENT (SURFACE) (P-401-8.1) | 135 | ton | 168.5 | 22747.5 |
| 12679-623-02-10 | PRIME COAT (P-602-5.1) | 185 | gallon | 0.01 | 1.85 |
| 12679-623-02-11 | TACK COAT (P-603-5.1) | 100 | gallon | 6.5 | 650 |
| 12679-623-02-12 | PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS YELLOW WHITE (P-620-5.1) | 120 | sf | 10 | 1200 |
| 12679-623-02-13 | TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS YELLOW WHITE (P-620-5.4) | 120 | sf | 10 | 1200 |
| 12679-623-02-14 | HYDROSEEDING (S-906-5.1) | 300 | sy | 6 | 1800 |
| ALTERNATES TOTAL | | | | | \$82,457.35 |
| TOTAL | | | | | \$4,060,790.60 |

WEEKLEY ASPHALT PAVING, INC.

Bid Contact **June Stone**
gail@weekleyasp.com
Ph 954-680-8005
Fax 954-680-8671

Address **20701 STIRLING RD**
PEMBROKE PINES, FL 33332

Bid Bond  (Status: Authorized on May 23, 2022)

| Item # | Line Item | Notes | Unit Price | Qty/Unit | Attch. Docs |
|-----------------|--|------------------------|----------------------------|-----------|-----------------|
| 12679-623-01-01 | BASE BID: CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1) | Supplier Product Code: | First Offer - \$81,995.00 | 1 / ls | \$81,995.00 Y Y |
| 12679-623-01-02 | BASE BID: TEMPORARY AIR AND WATER POLLUTION SOIL EROSION AND SILTATION CONTROL (C-102-5.1) | Supplier Product Code: | First Offer - \$23,400.00 | 1 / ls | \$23,400.00 Y |
| 12679-623-01-03 | BASE BID: MOBILIZATION (C-105-6.1) | Supplier Product Code: | First Offer - \$301,160.00 | 1 / ls | \$301,160.00 Y |
| 12679-623-01-04 | BASE BID: AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC (S-102-5.1) | Supplier Product Code: | First Offer - \$350,000.00 | 1 / ls | \$350,000.00 Y |
| 12679-623-01-05 | BASE BID: TEMPORARY FENCE FOR OWL TORTOISE NESTS (S-102-5.2) | Supplier Product Code: | First Offer - \$800.00 | 10 / ea | \$8,000.00 Y |
| 12679-623-01-06 | BASE BID: PROJECT SURVEY AND STAKEOUT (S-103-5.1) | Supplier Product Code: | First Offer - \$79,890.00 | 1 / ls | \$79,890.00 Y |
| 12679-623-01-07 | BASE BID: BLAST FENCE (S-108-5.1) | Supplier Product Code: | First Offer - \$174,260.00 | 1 / ls | \$174,260.00 Y |
| 12679-623-01-08 | BASE BID: FULL DEPTH ASPHALT PAVEMENT REMOVAL (P-101-5.1) | Supplier Product Code: | First Offer - \$10.17 | 9500 / sy | \$96,615.00 Y |
| 12679-623-01-09 | BASE BID: BITUMINOUS PAVEMENT MILLING (MAX 2 IN) (P-101-5.2) | Supplier Product Code: | First Offer - \$5.00 | 4780 / sy | \$23,900.00 Y |
| 12679-623-01-10 | BASE BID: ASPHALT PAVEMENT SURFACE REMOVAL (P-101-5.3) | Supplier Product Code: | First Offer - \$6.50 | 4720 / sy | \$30,680.00 Y |
| 12679-623-01-11 | BASE BID: CONCRETE FOUNDATION REMOVAL (P-101-5.4) | Supplier Product Code: | First Offer - \$39.00 | 430 / sy | \$16,770.00 Y |
| 12679-623-01-12 | BASE BID: ASPHALT PAVEMENT REMOVAL AND PARTIAL LIMEROCK REMOVAL (P-101-5.5) | Supplier Product Code: | First Offer - \$8.00 | 1230 / sy | \$9,840.00 Y |

Code:

| | | | | | | |
|-----------------|---|------------------------------|---------------------------|---------------|--------------|---|
| 12679-623-01-13 | BASE BID: CRACK SEALING (P-101-5.6) | Supplier Product Code: | First Offer - \$9.00 | 3000 / lf | \$27,000.00 | Y |
| 12679-623-01-14 | BASE BID: REMOVAL SALVAGE AND RELOCATION OF NON ELECTRICAL AIRPORT SIGNAGE (P-101-5.7) | Supplier Product Code: | First Offer - \$667.00 | 8 / ea | \$5,336.00 | Y |
| 12679-623-01-15 | BASE BID: BLAST FENCE REMOVAL (P-101-5.8) | Supplier Product Code: | First Offer - \$12,890.00 | 1 / ls | \$12,890.00 | Y |
| 12679-623-01-16 | BASE BID: UNCLASSIFIED EXCAVATION (P-152-4.1) | Supplier Product Code: | First Offer - \$36.00 | 4200 / cy | \$151,200.00 | Y |
| 12679-623-01-17 | BASE BID: EMBANKMENT (P-152-4.2) | Supplier Product Code: | First Offer - \$27.60 | 2000 / cy | \$55,200.00 | Y |
| 12679-623-01-18 | BASE BID: UTILITY SOFT DIG (P-152-4.3) | Supplier Product Code: | First Offer - \$4,450.00 | 1 / ls | \$4,450.00 | Y |
| 12679-623-01-19 | BASE BID: SUBBASE COURSE (12 IN THICK) (P-154-5.1) | Supplier Product Code: | First Offer - \$6.16 | 9800 / sy | \$60,368.00 | Y |
| 12679-623-01-20 | BASE BID: SUBBASE COURSE SHOULDER (6 IN THICK) (P-154-5.2) | Supplier Product Code: | First Offer - \$5.50 | 8020 / sy | \$44,110.00 | Y |
| 12679-623-01-21 | BASE BID: LIME ROCK BASE COURSE (9 IN THICK) (P-211-5.1) | Supplier Product Code: | First Offer - \$28.48 | 11800 / sy | \$336,064.00 | Y |
| 12679-623-01-22 | BASE BID: LIME ROCK BASE COURSE (VARIABLE THICKNESS 0 IN TO 4 IN THICK) (P-211-5.3) | Supplier Product Code: | First Offer - \$11.67 | 4710 / sy | \$54,965.70 | Y |
| 12679-623-01-23 | BASE BID: LIME ROCK TRANSITION WEDGE (P-211-5.4) | Supplier Product Code: | First Offer - \$1.00 | 2200 / lf | \$2,200.00 | Y |
| 12679-623-01-24 | BASE BID: HOT MIXED ASPHALT PAVEMENT (SURFACE) (P-401-8.1) | Supplier Product Code: | First Offer - \$168.50 | 4500 / ton | \$758,250.00 | Y |
| 12679-623-01-25 | BASE BID: HOT MIXED ASPHALT PAVEMENT (LEVELING) (P-403-8.1) | Supplier Product Code: | First Offer - \$190.00 | 350 / ton | \$66,500.00 | Y |
| 12679-623-01-26 | BASE BID: PRIME COAT (P-602-5.1) | Supplier Product Code: | First Offer - \$0.01 | 4950 / gallon | \$49.50 | Y |

| | | | | | | |
|-----------------|--|------------------------------|------------------------|---------------|--------------|---|
| 12679-623-01-27 | BASE BID: TACK COAT (P-603-5.1) | Supplier Product Code: | First Offer - \$6.50 | 2520 / gallon | \$16,380.00 | Y |
| 12679-623-01-28 | BASE BID: REINFORCED CONCRETE FOUNDATION FOR BLAST FENCE (P-610-6.1) | Supplier Product Code: | First Offer - \$800.00 | 225 / cy | \$180,000.00 | Y |
| 12679-623-01-29 | BASE BID: PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS (YELLOW WHITE) (P-620-5.1) | Supplier Product Code: | First Offer - \$4.00 | 7920 / sf | \$31,680.00 | Y |
| 12679-623-01-30 | BASE BID: PERMANENT AIRFIELD PAINTING WITH TYPE I GLASS BEADS (RED) (P-620-5.2) | Supplier Product Code: | First Offer - \$4.20 | 850 / sf | \$3,570.00 | Y |
| 12679-623-01-31 | BASE BID: PERMANENT AIRFIELD PAINTING WITH NO GLASS BEADS (BLACK) (P-620-5.3) | Supplier Product Code: | First Offer - \$1.40 | 14550 / sf | \$20,370.00 | Y |
| 12679-623-01-32 | BASE BID: TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS (YELLOW WHITE) (P-620-5.4) | Supplier Product Code: | First Offer - \$1.90 | 7920 / sf | \$15,048.00 | Y |
| 12679-623-01-33 | BASE BID: TEMPORARY AIRFIELD PAINTING WITH NO GLASS BEADS (RED) (P-620-5.5) | Supplier Product Code: | First Offer - \$3.70 | 850 / sf | \$3,145.00 | Y |
| 12679-623-01-34 | BASE BID: AIRFIELD PAINT REMOVAL (P-620-5.6) | Supplier Product Code: | First Offer - \$4.50 | 650 / sf | \$2,925.00 | Y |
| 12679-623-01-35 | BASE BID: SODDING (T-904-5.1) | Supplier Product Code: | First Offer - \$9.00 | 8720 / sy | \$78,480.00 | Y |
| 12679-623-01-36 | BASE BID: HYDROSEEDING (S-906-5.1) | Supplier Product Code: | First Offer - \$5.95 | 14790 / sy | \$88,000.50 | Y |
| 12679-623-01-37 | BASE BID: HAND EXCAVATE MINIMUM 8 IN WIDE X 28 IN DEEP IN EARTH (L-108-5.1) | Supplier Product Code: | First Offer - \$16.70 | 25 / lf | \$417.50 | Y |
| 12679-623-01-38 | BASE BID: SAWCUT HAND EXCAVATE MIN 8 IN WIDE 28 IN DEEP IN EXIST FULL PAVEMENT (L-108-5.2) | Supplier Product Code: | First Offer - \$22.25 | 25 / lf | \$556.25 | Y |
| 12679-623-01-39 | BASE BID: 3 QUARTER IN X 20 FT GROUND RODS CONNECTED TO COUNTERPOISE (L-108-5.3) | Supplier Product Code: | First Offer - \$278.00 | 26 / ea | \$7,228.00 | Y |
| 12679-623-01-40 | BASE BID: 10 FT ADDITIONAL GROUND ROD SECTIONS (L-108-5.4) | Supplier Product Code: | First Offer - \$100.00 | 26 / ea | \$2,600.00 | Y |
| 12679-623-01-41 | BASE BID: NO6 BRE SLD AWG CPOISE COND INSTALLED OVER CONDUIT SYSTEM (L-108-5.5) | Supplier Product | First Offer - \$0.90 | 7300 / lf | \$6,570.00 | Y |

Code:

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|-----------------|--|------------------------------|--------------------------|------------|-------------|---|
| 12679-623-01-42 | BASE BID: NO8 5KV L-824 COND INSTAL IN NEW AND EXIST CONDUIT DUCTBANK SYSTEM (L-108-5.6) | Supplier Product Code: | First Offer - \$2.12 | 13900 / lf | \$29,468.00 | Y |
| 12679-623-01-43 | BASE BID: 1 2IN SCHED 40 PVCCOND NON ENC DB INEARTH 24IN MIN CVR CMLPT INPLACE (L-110-5.1) | Supplier Product Code: | First Offer - \$11.15 | 6400 / lf | \$71,360.00 | Y |
| 12679-623-01-44 | BASE BID: 1 2INSCHED40PVCCOND CONCNCND INST IN NEWFULLSTRNGTHHPVMT24INMINCVRCOMPIN PLACE (L | Supplier Product Code: | First Offer - \$35.60 | 975 / lf | \$34,710.00 | Y |
| 12679-623-01-45 | BASE BID: 1 2INSCHED40PVCCOND CONCNCND INST IN EXISTFULLSTRNGTHHPVMT24INMINCVR CMLPTINPLCE (| Supplier Product Code: | First Offer - \$33.40 | 95 / lf | \$3,173.00 | Y |
| 12679-623-01-46 | BASE BID: INTERCEPT EXIST CONDUIT SYSTEM AND CONNECT TO NEW CONDUIT SYSTEM (L-110-5.4) | Supplier Product Code: | First Offer - \$39.00 | 20 / ea | \$780.00 | Y |
| 12679-623-01-47 | BASE BID: HAND EXCAVATE AND CONCRETE ENCASE EXIST 1W2 IN CONDUIT COMPLETE (L-110-5.5) | Supplier Product Code: | First Offer - \$31.15 | 550 / lf | \$17,132.50 | Y |
| 12679-623-01-48 | BASE BID: HAND EXCAVATE AND CONCRETE ENCASE EXIST 2W4 IN CONDUIT COMPLETE (L-110-5.6) | Supplier Product Code: | First Offer - \$44.50 | 110 / lf | \$4,895.00 | Y |
| 12679-623-01-49 | BASE BID: L 867 16 IN DIAMETER JUNCTION CAN WITH COVER INSTALLED IN EARTH (L-115-5.1) | Supplier Product Code: | First Offer - \$1,778.00 | 1 / ea | \$1,778.00 | Y |
| 12679-623-01-50 | BASE BID: L 867 16 IN DIAMETER BOTTOMLESS 2 CAN JCP INSTALL IN EARTH (L-115-5.2) | Supplier Product Code: | First Offer - \$8,334.00 | 2 / ea | \$16,668.00 | Y |
| 12679-623-01-51 | BASE BID: INTER EXISTLIGHT CAN IN EARTH EXIST PVEMNT CONNECT TO CONDUIT SYSTEM(L-115-5.3) | Supplier Product Code: | First Offer - \$289.00 | 5 / ea | \$1,445.00 | Y |
| 12679-623-01-52 | BASE BID: REMOV OF EXIST JC LIGHT BASE CAN IN EARTH COMPLETE (L-115-5.4) | Supplier Product Code: | First Offer - \$28.00 | 110 / ea | \$3,080.00 | Y |
| 12679-623-01-53 | BASE BID: REMOV OF EXIST JC LIGHT BASE CAN IN EXISTING PAVEMENT COMPLETE (L-115-5.5) | Supplier Product Code: | First Offer - \$61.20 | 9 / ea | \$550.80 | Y |
| 12679-623-01-54 | BASE BID: REMOVAL OF EXISTING 2 CAN JUNCTION CAN PLAZA IN EARTH, COMPLETE (L-115-5.6) | Supplier Product Code: | First Offer - \$139.00 | 1 / ea | \$139.00 | Y |
| 12679-623-01-55 | BASE BID: L861T(L) LED TAXI ELEV EDGE LIGHT AND NEW BASE INSTAL IN EARTH (L-125-5.1) | Supplier Product | First Offer - \$2,778.00 | 30 / ea | \$83,340.00 | Y |

Code:

| | | | | | | |
|-----------------|--|------------------------|---------------------------|---------|--------------|---|
| 12679-623-01-56 | BASE BID: RELOL861T(L)LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN EARTH(L-125-5.2) | Supplier Product Code: | First Offer - \$2,667.00 | 95 / ea | \$253,365.00 | Y |
| 12679-623-01-57 | BASE BID: RELOL861T(L)LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN NEW PVMT(L-125-5.3) | Supplier Product Code: | First Offer - \$1,945.00 | 5 / ea | \$9,725.00 | Y |
| 12679-623-01-58 | BASE BID: RELOL861T(L)LED TAXI ELEV EDGE LIGHT WITH NEW BC INSTAL IN EXIST PVMT (L-125-5.4) | Supplier Product Code: | First Offer - \$2,000.00 | 4 / ea | \$8,000.00 | Y |
| 12679-623-01-59 | BASE BID: RELOL852(L)LED FLUSH RGL WITH NEW 2 PC L868 BC INSTALL IN NEW PAVEMENT (L-125-5.5) | Supplier Product Code: | First Offer - \$2,780.00 | 6 / ea | \$16,680.00 | Y |
| 12679-623-01-60 | BASE BID: RELOL804(L)LED ELEVATED RGL WITH NEW BASE CAN INSTALLED IN EARTH (L-125-5.6) | Supplier Product Code: | First Offer - \$1,945.00 | 2 / ea | \$3,890.00 | Y |
| 12679-623-01-61 | BASE BID: L858(L) SIZE 1 3 TO 4 CHAR LED GUIDE SIGN AND CONC BASE INSTALL IN EARTH(L-125-5.7) | Supplier Product Code: | First Offer - \$10,223.00 | 2 / ea | \$20,446.00 | Y |
| 12679-623-01-62 | BASE BID: L858(L) SIZE 1 5 TO 6 CHAR LED GUIDE SIGN AND CONC BASE INSTALL IN EARTH(L-125-5.8) | Supplier Product Code: | First Offer - \$12,667.00 | 1 / ea | \$12,667.00 | Y |
| 12679-623-01-63 | BASE BID: L858(L) SIZE 1 7 TO 8 CHAR LED GUIDE SIGN AND CONC BASE INSTALL IN EARTH(L-125-5.9) | Supplier Product Code: | First Offer - \$14,328.00 | 1 / ea | \$14,328.00 | Y |
| 12679-623-01-64 | BASE BID: L858(L) SIZE 1 3 TO 4 CHAR LED GUIDE SIGN AND CONC BASE INSTAL IN NEW PVMT(L-125-5.10) | Supplier Product Code: | First Offer - \$10,223.00 | 1 / ea | \$10,223.00 | Y |
| 12679-623-01-65 | BASE BID: REPANL L858(L) SIZE 1 2 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANLS (L-125-5.) | Supplier Product Code: | First Offer - \$100.00 | 1 / ea | \$100.00 | Y |
| 12679-623-01-66 | BASE BID: REPANL L858(L) SIZE 1 3 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANLS (L-125-5.) | Supplier Product Code: | First Offer - \$135.00 | 2 / ea | \$270.00 | Y |
| 12679-623-01-67 | BASE BID: RELO L858(L) SIZE 1 2 MOD LED GUIDE SIGN WITH NEW CONC BASE INST EARTH(L-125-5.13) | Supplier Product Code: | First Offer - \$7,223.00 | 7 / ea | \$50,561.00 | Y |
| 12679-623-01-68 | BASE BID: RELO L858(L) SIZE 1 3 MOD LED GUIDE SIGN WITH NEW CONC BASE INST EARTH(L-125-5.14) | Supplier Product Code: | First Offer - \$11,778.00 | 5 / ea | \$58,890.00 | Y |
| 12679-623-01-69 | BASE BID: RELO L858(L) SIZE 1 4 MOD LED GUIDE SIGN WITH NEW CONC BASE INST EARTH(L-125-5.15) | Supplier Product Code: | First Offer - \$10,556.00 | 2 / ea | \$21,112.00 | Y |

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|------------------|--|------------------------------|---------------------------|---------|-------------|---|
| 12679-623--01-70 | BASE BID: REMVE EXIST GUIDE SIGN AND CONC BASE IN EARTH EXIST PAVEMNT COMP (L-125-5.16) | Supplier Product Code: | First Offer - \$339.00 | 16 / ea | \$5,424.00 | Y |
| 12679-623--01-71 | BASE BID: REMOVAL OF EXISTING OBSTRUCTION LIGHTING SYSTEM COMPLETE (L-125-5.17) | Supplier Product Code: | First Offer - \$834.00 | 1 / ea | \$834.00 | Y |
| 12679-623--01-72 | BASE BID: INTER EXIST CIRC COND IN EXIST BC MH JC AND EXTND CIRC ACCORDINGLY (L-125-5.18) | Supplier Product Code: | First Offer - \$212.00 | 13 / ea | \$2,756.00 | Y |
| 12679-623--01-73 | BASE BID: IDENT OF CABLE DUCTBANK AND LIGHT FIXTURES PER FAA SPECS (L-125-5.19) | Supplier Product Code: | First Offer - \$38,890.00 | 1 / ls | \$38,890.00 | Y |
| 12679-623--01-74 | BASE BID: INSTALLATION OF ALL ACNT ALCMS GRAPHIC UPDATES COMPLETE (L-125-5.20) | Supplier Product Code: | First Offer - \$2,780.00 | 1 / ls | \$2,780.00 | Y |

Bid Allowance

\$18,500.00

Lot Total \$4,031,523.75

| Item # | Line Item | Notes | Unit Price | Qty/Unit | Attch. Docs |
|------------------|--|------------------------------|--------------------------|-----------|---------------|
| 12679-623--02-01 | ADD ALT: CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1) | Supplier Product Code: | First Offer - \$2,000.00 | 1 / ls | \$2,000.00 Y |
| 12679-623--02-02 | ADD ALT: TEMPORARY AIR WATER POLLUTION SOIL EROSION AND SILTATION CONTROL (C- 102-5.1) | Supplier Product Code: | First Offer - \$2,000.00 | 1 / ls | \$2,000.00 Y |
| 12679-623--02-03 | ADD ALT: MOBILIZATION (C-105-6.1) | Supplier Product Code: | First Offer - \$5,000.00 | 1 / ls | \$5,000.00 Y |
| 12679-623--02-04 | ADD ALT: AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC (S-102-5.1) | Supplier Product Code: | First Offer - \$5,000.00 | 1 / ls | \$5,000.00 Y |
| 12679-623--02-05 | ADD ALT: PROJECT SURVEY AND STAKEOUT (S- 103-5.1) | Supplier Product Code: | First Offer - \$4,000.00 | 1 / ls | \$4,000.00 Y |
| 12679-623--02-06 | ADD ALT: UNCLASSIFIED EXCAVATION (P-152- 4.1) | Supplier Product Code: | First Offer - \$36.00 | 500 / cy | \$18,000.00 Y |
| 12679-623--02-07 | ADD ALT: EMBANKMENT (P-152-4.2) | Supplier Product Code: | First Offer - \$35.00 | 200 / cy | \$7,000.00 Y |
| 12679-623--02-08 | ADD ALT: LIME ROCK BASE COURSE (6 IN THICK) (P-211-5.2) | Supplier Product Code: | First Offer - \$19.60 | 605 / sy | \$11,858.00 Y |
| 12679-623--02-09 | ADD ALT: HOT MIXED ASPHALT PAVEMENT | Supplier | First Offer - \$168.50 | 135 / ton | \$22,747.50 Y |

(SURFACE) (P-401-8.1)

**Product
Code:**

| | | | | | | |
|-----------------|--|---------------------------------------|------------------------------|--------------|-------------------|----------|
| 12679-623-02-10 | ADD ALT: PRIME COAT (P-602-5.1) | Supplier Product Code: | First Offer - \$0.01 | 185 / gallon | \$1.85 | Y |
| 12679-623-02-11 | ADD ALT: TACK COAT (P-603-5.1) | Supplier Product Code: | First Offer - \$6.50 | 100 / gallon | \$650.00 | Y |
| 12679-623-02-12 | ADD ALT: PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS YELLOW WHITE (P- 620-5.1) | Supplier Product Code: | First Offer - \$10.00 | 120 / sf | \$1,200.00 | Y |
| 12679-623-02-13 | ADD ALT: TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS YELLOW WHITE (P- 620-5.4) | Supplier Product Code: | First Offer - \$10.00 | 120 / sf | \$1,200.00 | Y |
| 12679-623-02-14 | ADD ALT: HYDROSEEDING (S-906-5.1) | Supplier Product Code: | First Offer - \$6.00 | 300 / sy | \$1,800.00 | Y |

Bid Allowance**\$18,500.00****Lot Total \$82,457.35****Supplier Total \$4,113,981.10**

Bid Bond from

| | |
|------------------|--|
| Surety | CNA Surety - Orlando Branch |
| Bid Bond Number | SFL05214663 |
| Bond Type | Bid Bond |
| Bond Form | Bid Bond in Accordance with Contract Specifications |
| Bid Date | 2022-06-09T04:00:00Z |
| Bid ID | 12679-623 |
| Security Percent | 5% |
| Job Description | Bid No: 12679-623 - FXE Runway 9 Run-up Area Relocation & SouthEnd Taxiway Intersection Improvements |

| | |
|----------------|---|
| Agency ID | 983 |
| Name | USI Insurance Services National |
| Address | 2601 S Bayshore Drive , Coconut Grove, FL 33133, US |
| Phone | 786-785-1126 |
| Contact Name | Francys Tolon |
| Bond Status | Executed |
| Execution Date | 2022-05-21T01:14:11Z |

| | |
|------------------------|---|
| Contractor ID | |
| Name | Weekley Asphalt Paving, Inc. |
| Contractor Tax ID | 590753039 |
| Assigned Contractor ID | 3162063114 |
| Address | 20701 Stirling Road, Pembroke Pines, FL 33332, US |
| Phone | 954-680-8005 |

| | |
|---------|--|
| Name | City of Fort Lauderdale |
| Address | 100 North Andrews Ave, Fort Lauderdale, FL 33301, US |

| | |
|------------------------|-----------------------------|
| Surety ID | 11422 |
| Name | CNA Surety - Orlando Branch |
| NAIC Number | 13188 |
| State of Incorporation | |
| Contact | Bruce Bozelka |

Address 2600 Lucien Way, Suite 130, Maitland, FL 32751, US
Phone (407)919-3942
Terror Rider

WEEKLEY ASPHALT PAVING, INC.

Item: **BASE BID:CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1)**

Attachments

WAP attachments.pdf

BID NO. 12679-623 SPECIFIC REFERENCES FORM

The Contractor shall provide references for at least three (3) airfield construction projects that are of similar scope and budget within the last ten (10) years.

Bidder shall also demonstrate successful completion of a minimum of three (3) projects of similar scope and scale (or larger) and shall, for each project listed, identify location; dates of construction; project name and overall scope; scope of work that was self-performed by Contractor; and client's name, address, telephone number and e-mail address.

Note: Do not include proposed team members or parent/subsidiary/affiliated companies as references in your submittals.

A. PRIME BIDDER'S NAME: Weekley Asphalt Paving, Inc.

CLIENT NO.1 - Name of firm to be contacted: Broward County

Address: 1 North University Drive, Plantation, FL 33324

Contact Person: Fernando Blanco

Phone No: (954) 359-6260

Contact E-Mail Address: fblanco@broward.org

Project Performance Period: 9/2021 to 1/2022
Dates should be in mm/yy format

Project Name : HWO Dual Taxilane Access to Taxiway L at North Perry Airport

Location of Project: North Perry Airport, Pembroke Pines, FL

Description of the overall scope: Construction of a 290 linear feet dual access taxilane and retention drainage swales.

Description of work that was self-performed by Bidder:

Paving, drainage and grading

BID NO. 12679-623 SPECIFIC REFERENCES FORMCLIENT NO.3 - Name of firm to be contacted: Boca Raton Airport AuthorityAddress: 903 NW 35th Street, Boca Raton, FL 33431Contact Person: Clara BennettPhone No: (561) 325-5199Contact E-Mail Address: clara@bocaairport.comProject Performance Period: 10/2018 to 11/2018
Dates should be in mm/yy formatProject Name : 2018 Airfield Improvements, Schedule D - Rejuvenate and Remark Runway 5-23Location of Project: Boca Raton AirportDescription of the overall scope: Improvements consist of asphalt surface treatment,
maintenance of traffic and pavement markings of Runway 5-23.

Description of work that was self-performed by Bidder:

Rejuvenate and Remark Runway 5-23

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 - 954-831-4000

VALID OCTOBER 1, 2021 THROUGH SEPTEMBER 30, 2022

DBA: WEEKLEY ASPHALT PAVING INC
Business Name:

Receipt #: 189-4834
Business Type: ALL OTHER TYPES CONTRACTOR
 (ASPHALT CONST)

Owner Name: WAYNE D WEEKLEY
Business Location: 20701 STIRLING RD
 PEMBROKE PINES
Business Phone: 954-680-8005

Business Opened: 01/27/1994
State/County/Cert/Reg: CC-78-581
Exemption Code:

Rooms

Seats

Employees
30

Machines

Professionals

| For Vending Business Only | | | | | | |
|---------------------------|--------------|---------|---------------|-------------|-----------------|------------|
| Number of Machines: | | | Vending Type: | | | |
| Tax Amount | Transfer Fee | NSF Fee | Penalty | Prior Years | Collection Cost | Total Paid |
| 81.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 81.00 |

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS**THIS BECOMES A TAX RECEIPT****WHEN VALIDATED**

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

WAYNE D WEEKLEY
 20701 STIRLING RD
 PEMBROKE PINES, FL 33332

Receipt # 1CP-20-00011497
Paid 07/27/2021 81.00
07/26/2021 Effective Date

2021 - 2022**BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT**

**BROWARD COUNTY, FLORIDA
 CERTIFICATE OF COMPETENCY**

CC# 3A MAJOR ROADS (ASPHALT AND CONCRETE
 PAVING FOR INTERSTATE, PRIMARY,
 SECONDARY, AND ARTERIAL ROADWAYS AND
 AIRPORTS AND WORK INCIDENTAL THERETO)
 78-581
 WEEKLEY, WAYNE D. - QUALIFYING
 WEEKLEY ASPHALT PAVING INC
 20701 STIRLING RD
 PEMBROKE PINES FL 33332
 EXPIRES 08/31/2023



**STATE OF FLORIDA DEPARTMENT
 OF BUSINESS AND PROFESSIONAL
 REGULATION**

CGC1518050

ISSUED: 05/14/2020

CERTIFIED GENERAL CONTRACTOR
 WORKMAN, BARRY TOD
 WEEKLEY ASPHALT PAVING INC

Signature

LICENSED UNDER CHAPTER 489, FLORIDA STATUTES
 EXPIRATION DATE: AUGUST 31, 2022



**STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

2601 BLAIR STONE ROAD
TALLAHASSEE FL 32399-0783

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto www.myfloridalicense.com. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!



STATE OF FLORIDA DEPARTMENT
OF BUSINESS AND PROFESSIONAL
REGULATION

CGC1518050
CERTIFIED GENERAL CONTRACTOR
WORKMAN, BARRY TOD
WEEKLEY ASPHALT PAVING INC

ISSUED: 06/07/2022

Signature
LICENSED UNDER CHAPTER 489, FLORIDA STATUTES
EXPIRATION DATE: AUGUST 31, 2024

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

**STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD**

LICENSE NUMBER: CGC1518050

EXPIRATION DATE: AUGUST 31, 2024

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

WORKMAN, BARRY TOD
WEEKLEY ASPHALT PAVING INC
304 INDIAN TRACE, STE 172
WESTON FL 33326



ISSUED: 06/07/2022

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

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**Florida Department of Transportation**RON DESANTIS
GOVERNOR605 Suwannee Street
Tallahassee, FL 32399-0450JARED W. PERDUE, P.E.
SECRETARY

April 11, 2022

WEEKLEY ASPHALT PAVING, INC.
20701 STIRLING ROAD
SOUTHWEST RANCHES, FLORIDA 33332**RE: CERTIFICATE OF QUALIFICATION**

The Department of Transportation has qualified your company for the type of work indicated below.

FDOT APPROVED WORK CLASSES:

DEBRIS REMOVAL (EMERGENCY), DRAINAGE, ELECTRICAL WORK, FENCING, FLEXIBLE PAVING, GRADING, GRASSING, SEEDING AND SODDING, GUARDRAIL, HOT PLANT-MIXED BITUM. COURSES, INTERMEDIATE BRIDGES, LANDSCAPING, MINOR BRIDGES, PAVEMENT MARKING, PORTLAND CEMENT CONCRETE ROADWAY PAVING, R&R INTERMEDIATE BRIDGES ("R&R" IS REPAIR AND REHABILITATE), R&R MINOR BRIDGES, ROADWAY SIGNING, SIDEWALK, TRAFFIC SIGNAL, CURB & GUTTER, RIP RAP, SANITARY SEWER, WATER LINE.

Unless notified otherwise, this Certificate of Qualification will expire **6/30/2023**.

In accordance with Section 337.14(4), Florida Statutes, changes to Ability Factor or Maximum Capacity Rating will not take effect until after the expiration of the current certificate of prequalification (if applicable).

In accordance with Section 337.14(1), Florida Statutes, an application for qualification must be filed within (4) months of the ending date of the applicant's audited annual financial statements.

If the company's maximum capacity has been revised, it may be accessed by logging into the Contractor Prequalification Application System via the following link:

[HTTPS://fdotwp1.dot.state.fl.us/ContractorPreQualification](https://fdotwp1.dot.state.fl.us/ContractorPreQualification)

Once logged in, select "View" for the most recently approved application, and then click the "Manage" and "Application Summary" tabs.

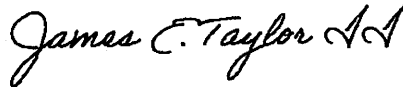
The company may apply for a Revised Certificate of Qualification at any time prior to the expiration date of this certificate according to Section 14-22.0041(3), Florida Administrative Code (F.A.C.), by accessing the most recently approved application as shown above and choosing "Update" instead of "View." If certification in additional classes of work is desired, documentation is needed to show that the company has performed such work.

Improve Safety, Enhance Mobility, Inspire Innovation
www.fdot.gov

WEEKLEY ASPHALT PAVING, INC.
April 11, 2022
Page Two

All prequalified contractors are required by Section 14-22.006(3), F.A.C., to certify their work underway monthly in order to adjust maximum bidding capacity to available bidding capacity. You can find the link to this report at the website shown above.

Sincerely,

A handwritten signature in black ink that reads "James E. Taylor AA". The signature is fluid and cursive, with the initials "AA" at the end.

for Alan Autry, Manager
Contracts Administration Office

AA:cg

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

Attachment #1

| CLASS | | | |
|--------------|----------------|---------------------------|-------------------|
| 100 | Equip # | Description | Serial # |
| | 021 | 2010 FORD EXPEDITION | 1FMJU1F56AEB08057 |
| | 22 | 2015 FORD EXPEDITION KING | 1FMJU1JT1FWF03082 |
| | 24 | 2014 DODGE RAM 3500 | 3C6URVHD2EE130640 |
| | 026 | 07 FORD EDGE | 2FMDK36C67BB38418 |
| | 030 | 01 CHRYSLER TOWN & CTRY | 2C8GP54L61R400405 |
| | 031 | 2012 DODGE DURANGO | 1C4SDHCT2CC204738 |
| 101 | 035 | 2011 FORD F-250 | 1FT7W2AT0BEC28572 |
| | 036 | 2011 FORD F-250 | 1FT7W2AT8BEC66373 |
| | 037 | 06 FORD F-250 | 1FTSX20P36ED62560 |
| | 038 | 2011 FORD F-250 | 1FT7X2AT5BEC33702 |
| | 040 | 06 FORD F-250 SUPER DUTY | 1FTSX20P66EB67178 |
| | 041 | 2014 DODGE RAM 2500 | 3C6MR4ALXEG269317 |
| | 042 | 2014 DODGE RAM 3500 | 3C7WRSCLXEG242950 |
| | 043 | 2015 DODGE RAM 3500 | 3C7WRSAL4FG570367 |
| | 44 | 2015 DODGE RAM 1500 | 1c6rr6fm2fs521896 |
| | 045 | 06 FORD F-250 SUPER DUTY | 1FTSX20PX6EB88955 |
| | 052 | 99 FORD F-250 SUPER DUTY | 1FTNX20F8XED77643 |
| | 056 | 06 FORD F-250 SUPER DUTY | 1FTSX20P76ED83489 |
| | 061 | 15 DODGE RAM 5500 P/U | 3C7WRMFL7FG511575 |
| | 063 | 02 DODGE RAM 2500 P/U | 3B7KC23662M263038 |
| | 065 | 1999 DODGE RAM 2500 LARAM | 1B7KC2367XJ511477 |
| | 073 | 04 F150 SUPERCAB | 1FTPX12594NC08525 |
| | 077 | 2013 FORD F-150 | 1FTFW1CT0DFC39720 |
| | 078 | 2013 FORD F-150 | 1FTFW1CT3DFC47441 |
| | 79 | 2015 DODGE RAM 1500 | 1C6RR6FM3FS535287 |
| | 80 | 2015 DODGE RAM 1500 | 1C6RR6FM1FS535286 |
| | 87 | 2016 DODGE RAM 1500 QUAD | 1C6RR6FM0GS243503 |
| | 88 | 2016 DODGE RAM 1500 CREW | 1C6RR6KM0GS298135 |
| | 091 | 08 DODGE LARAMIE | 1D7HA182X8S583999 |
| | 094 | 08 DODGE RAM 1500 | 1D7HA18258S524987 |

Equipment List

| 101 | Equip # | Description | Serial # |
|------------|----------------|---------------------------|--------------------|
| | 095 | 2014 DODGE RAM 1500 | 3C6JR6DM5EG269972 |
| | 099 | 2012 DODGE RAM 1500 | 1C6RD7FP9CS342359 |
| | 103 | 06 FORD F-350 SUPER DUTY | 1FDWW36P26EB93595 |
| | 105 | 04 USED FORD F-350 SUPER | XLFTSW30P74EC19262 |
| | 109 | 05 FORD F250 SUPER DUTY | 1FTSX20P95EB86239 |
| | 130 | 2016 ISUZU TRUCK | JALB4W172G7F00109 |
| | 112 | 06 FORD F350 SUPER DUTY | 1FDWW36P86EC25806 |
| | 177 | 2015 DODGE RAM 2500 | 1C6UR4CL6FG509655 |
| | 178 | 2015 DODGE RAM 1500 | 1C6RR6FMXFS535285 |
| | 179 | 14 DODGE RAM 3500 | 3C7WRSBL2EG138227 |
| | 181 | 14 DODGE RAM 3500 FLATBED | 3C7WRSCLXEG120816 |
| | 182 | 2014 DODGE RAM | 3C7WRSAL9EG182811 |
| | 183 | 2014 DODGE RAM 2500 | 3C6UR4CL3EG146472 |
| | 184 | 2013 DODGE RAM 2500 CREW | 3C6UR4HL2DG578705 |
| | 185 | 2013 RAM 2500 TRUCK | 3C6UR4HL5DG520202 |
| | 186 | 2011 DODGE 4500 CREW | 3D6WU6CLXBG580440 |
| | 188 | 2011 DODGE RAM 3500 | 3D73M3CLXBG512555 |
| | 189 | 2011 DODGE RAM 3500 | 3D73M3CL1BG512556 |
| | 190 | 07 DODGE MEGA 3500 TRUCK | 3D7ML39C47G701062 |
| | 191 | 07 DODGE 3500 MEGA CAB TK | 3D7ML39L07G701060 |
| | 192 | 07 DODGE 3500 MEGA CAB TK | 3D7ML39L57G701054 |
| | 195 | 05 F450 FLAT BED | 1FDXF46P45EC89110 |
| | 197 | 2015 DODGE 1500 LONGHORN | 1C6RR7PT7FS529505 |
| | 198 | 2011 FORD F-550 | 1FDUF5GT2BEA65432 |
| | 199 | 1999 FORD F-550 | 1FDAF56F0XEC43330 |
| | SE107 | 1999 FORD F350 CREW CAB | 1FTSW30F8XEE69556 |
| | PV-001 | 2014 DODGE RAM 4500 | 3C7WRLEL7EG209021 |
| | PV-002 | 2011 DODGE 2500 P/U TRUCK | 3D7UT2HL3BG584367 |
| | PV-003 | 2013 FORD F-350 | 1FT8W3BT6DEB12207 |
| 104 | | | |
| | T24 | 06 MACK DUMP TRUCK CV713 | 1M2AG11C06M040414 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 104 | Equip # | Description | Serial # |
|-----|---------|---------------------------|-------------------|
| | T25 | 06 MACK DUMP TRUCK CV713 | 1M2AG11C26M040284 |
| | T26 | 05 MACK DUMP TRUCK CV713 | 1M2AG11C55M020870 |
| | T27 | 05 MACK DUMP TRUCK CV713 | 1M2AG11C25M022351 |
| | T28 | 04 MACK DUMP TRUCK CV713 | 1M2AG11CX4M012181 |
| | T29 | 05 MACK DUMP TRUCK CV713 | 1M2AG11C15M017318 |
| | T30 | 05 MACK DUMP TRUCK CV713 | 1M2AG11C75M035659 |
| | T31 | 04 MACK DUMP TRUCK CV713 | 1M2AG11C84M013068 |
| | T32 | 07 MACK DUMP TRUCK CV713 | 1M2AG11C17M055683 |
| | T33 | 06 MACK DUMP TRUCK CV713 | 1M2AG11C76M030768 |
| | T34 | 06 MACK DUMP TRUCK CV713 | 1M2AG11C96M033476 |
| | T35 | 06 MACK DUMP TRUCK CV713 | 1M2AG11C56M042188 |
| | T36 | 02 USED MACK DMP TK CV713 | 1M2AG10C02M001544 |
| | T38 | 03 MACK DUMP TRUCK CV713 | 1M2AG11C93M006421 |
| | T39 | 04 MACK DUMP TRUCK CV713 | 1M2AG11C74M010470 |
| | T40 | 00 MACK DUMP TRUCK RD690S | 1M2P264C0YM029398 |
| | T41 | 02 MACK DUMP TRUCK CV713 | 1M2AG11C42M001237 |
| | T42 | 02 MACK DUMP TRUCK CV713 | 1M2AG11C62M001238 |
| | T43 | 01 MACK DUMP TRUCK RD688S | 1M2P270CX1M056061 |
| | T47 | 99 MACK RD 690S | 1M2P264C2XM027327 |
| | T48 | 99 MACK RD 690S | 1M2P264C4XM027328 |
| | T49 | 99 MACK RD 690S | 1M2P264C6XM027329 |
| | T50 | 02 USED MACK DUMP TRUCK | 1M2P267C12M064695 |
| | T51 | 02 USED MACK DUMP TRUCK | 1M2P267C42M064660 |
| | T52 | 02 USED MACK DUMP TRUCK | 1M2P267C22M064656 |
| | T53 | 02 MACK DUMP TRUCK RD688S | 1M2P267C02M064655 |
| | T87 | 99 MACK TRACTOR CH613 | 1M1AA12Y6XW113596 |
| | T88 | 00 MACK TRACTOR CH613 | 1M1AA12Y9YW119877 |
| | T89 | 98 MACK TRCTOR CH613 | 1M1AA12Y4WW090138 |
| | T90 | 00 MACK TRACTOR CH613 | 1M1AA12Y6YW121974 |
| | T91 | 00 MACK TRUCK CH613 | 1M1AA13Y4YW119834 |
| | T92 | 1999 MACK TRACTOR CH613 | 1M1AA13Y0XW105413 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 104 | Equip # | Description | Serial # |
|------------|----------------|----------------------------|-------------------|
| | T93 | 1999 MACK TRACTOR CH613 | 1M1AA14Y2XW109090 |
| | T94 | 07 MACK TRACTOR CHN613 | 1M1AJ07Y97N011329 |
| | T95 | 03 MACK TRACTOR CX613 | 1M1AE06Y73W013803 |
| | T96 | 05 PETERBILT 335 TRACTOR | 2XPLAZ7X75M884528 |
| 106 | | | |
| | D23 | 2013 FORD/2000 ETNYRE DIST | 3FRXF7FJ2DV790990 |
| | D24 | 2003 STERLING M7500 TRUCK | 2FZACGAK93AL66443 |
| | D25 | 09 FORD/09 ETNYRE DIST | 3FRXF75D09V134273 |
| | D26 | 01 ETNYRE ASPHALT DIST | 2FZAASAK11AJ18483 |
| | D27 | 06 ETNYRE CENTENNIAL DIST | 2FZAASDC06AW73579 |
| 107 | | | |
| | 193 | 2008 INT'L MECH TK | 1HTMMAAL48H636411 |
| | 194 | 06 FORD F650 | 3FRNF65036V339872 |
| | S21 | 08 FORD F-750 | EFRXF75D48V062041 |
| | S23 | 14 FORD F-750 | 3FRNW7FC8DV019670 |
| | S24 | 06 FORD F-650 | 3FRWW65CX6V356795 |
| | S25 | 2000 FORD F650 | 3FDWW6542YMA06426 |
| | S26 | 2000 FORD F650 | 3FDWW6544YMA06444 |
| | S27 | 01 STERLING M7500 | 2FZAAJAK21AG92250 |
| 110 | TL95 | 06 EAST DUMP TRL | 1E1D1P3886RD39589 |
| 111 | | | |
| | LBT08 | 08 TRAILBOSS LOWBOY | 4SODK483581002847 |
| | LBT09 | 07 TRAILBOSS LOWBOY | 4SODK533571002679 |
| | LBT10 | TRAL KING TRAILER | 1TKJ049353M122853 |
| | SEC05 | 1971 FONTAINE TRAILER | 13840 |
| | TL94 | 1974 FLATBED TRAILER | 46797 |
| 112 | | | |
| | TL-76 | ASPHALT STORAGE TANKER | |
| | TL77 | 06 ETNYRE ALUM TANKER | 1E9T532316E007204 |
| | TL78 | 1986 ETNYRE LOWER TANKER | 1E9T44200GE007095 |
| | TL-79 | ASPHALT TANKER | |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 113 | Equip # | Description | Serial # |
|-----|---------|--------------------------|--------------------|
| | SE111 | 1966 FRU TANK TRLR | 228010 |
| | GTL01 | 69 STRIGHT EDGE TRAILER | 9L9250 |
| | GTL02 | 02 ALL PRO TRAILER | 1A920029123B15732 |
| | GTL03 | 02 ALL PRO TRAILER | 1A920029123B17944 |
| | GTL04 | 1978 GENERAL TRAILER | 8AP78218 |
| | GTL06 | 05 CALT TRAILER (HORSE) | 4GAHC122651001533 |
| | GTL07 | 06 MALLARD RV | 1EF1C302766011711 |
| | GTL08 | 06 ADVANCED TRAILER | 1A9BU15246D736040 |
| | GTL10 | 08 STRAIGHTEDGE TRL | 10022008 |
| | GTL11 | 06 HOMEMADE TRL | NOVIN0200504683 |
| | GTL12 | 1977 HOMEMADE TRAILER | NOVIN0200097340 |
| | GTL13 | 04 HOMEMADE TRAILER 16' | NOVIN0200425862 |
| | GTL14 | 15 HOMEMADE TRAILER 15' | NOVIN0201096740 |
| | GTL15 | 05 FLATBED EQUIP TRAILER | 5MTPF16235A000023 |
| | GTL16 | 05 MILLENUM TRAILER | 5MTGD28244A000782 |
| | GTL17 | 05 CARRY-ON TRAILER | 4YMUL10155G025494 |
| | GTL18 | 06 MILLENNIUM TRL | 5MTGD630275A000343 |
| | GTL19 | 1983 HOMEMADE TRAILER | NOVIN0200097301 |
| | GTL21 | 05 GOOSENECK TRAILER | 16GS628235B079440 |
| | GTL22 | 05 WINCO 12' BOBCAT TRLR | 154BC12256T009147 |
| | GTL23 | 07 KAUFMAN TRAILER | 15XFD18267L002492 |
| | GTL24 | 07 KAUFMAN TRAILER | 15XFD182X7L002494 |
| | GTL25 | 07 KAUFMAN TRAILER | 15XFD18287L002493 |
| | GTL26 | 1990 HOOPER 16' TRAILER | HICO 0000000001087 |
| | GTL27 | 2015 GOOSENECK TRAILER | 16GS63621FB069337 |
| | GTL28 | 08 TANDEM AXLE TRAILER | 1S907X1618M982723 |
| | GTL30 | 07 MILLENNIUM TRAILER | 5MTPT18247A000027 |
| | GTL31 | 08 BIG TEX TRAILER | 16VEX182182395050 |
| | GTL32 | 09 ENCLOSED CONTRTR TRL | 4YMCL16259G000953 |
| | GTL33 | 09 KAUFMAN TRAILER | 5VGFA202X9L002064 |
| | GTL35 | 2012 KAUFMAN D TILT DEL | 5VGFD2221CL002501 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 113 | Equip # | Description | Serial # |
|-----|---------|---------------------------------|--------------------|
| | GTL36 | 2012 KAUFMAN D TILT DEL | 5VGFD2223CL002502 |
| | GTL37 | 2010 HMDE TRAILER | NOVIN0200861842 |
| | GTL38 | GOOSENECK DUMP TRAILER | 154FD20206T011282 |
| | GTL39 | TILT DEC EQUIP TRAILER | 5FTUH1211Y1014457 |
| | GTL94 | 1995 CUSTOM FLATBED TRLR | 1YB321530S1B1T261 |
| | SEC74 | 1974 GENERAL FLATBED TRLR | 6D74182(GTL03) |
| | | | |
| 200 | 203 | 00 STERLING G&K 2500 WATER TRK | 2FWWHECB6YAF39660 |
| | 204 | 00 STERLING 2500 WATER TRK | 2FXHRFAC4YAF15397 |
| 300 | | | |
| | 300 | 06 CAT CB434D VIB ROLLER | CATCB434KCCNH00544 |
| | 301 | 05 DYNAPACD CC142 ROLLER | 60213112 |
| | 303 | 05 CAT DBL DRUM ROLLER CB224E | CATCB224P22400732 |
| | 304 | 09 CAT CB34 TANDEM VIB ROLLER | CATOCB34J34500272 |
| | 305 | 05 CAT DBL DRUM ROLLER CB224E | CATCB224P22400733 |
| | 306 | 06 CAT CB334E ASPHALT RLR | CATCB334HC3A00229 |
| | 307 | 06 CAT CB334E ASPHALT RLR | CATCB334AC3A00230 |
| | 308 | 06 CAT CB334E TANDEM RLLR | CATCB334TC3A00283 |
| | 309 | 08 CAT CB24 TANDEM VIB RLLR | CAT0CB24H24000118 |
| | 310 | INGERSOLL RAND SD100 RLR | 174315 |
| | 311 | ING RAND DBL DRUM ROLLER DD70 | 172705 |
| | 312 | 2007 CAT CB434D TANDEM RO | CATCB434KCNH00690 |
| | 313 | 2007 CAT CB434D TANDEM RL | CATCB434CCNH00658 |
| | 314 | 2011 VOLVO SD100D ROLLER | 226122 |
| | 315 | 2007 CAT CB224E TANDEM VIB RLLR | CATCB224K22402837 |
| | 316 | 2005 CAT CB224E TANDEM VIB RLLR | CATCB224A22400639 |
| | 317 | 2000 CAT CB224E TANDEM VIB RLLR | CATCB224K22401002 |
| | 319 | 86 DYNAPAC MDL CC 21 RLR | 476084 |
| | 325 | 05 DYNAPAC CP142 ROLLER | 2163BR2100 |
| | 326 | 07 DYNAPAC ROLLER CP142 | 2163BR2219 |
| | 327 | 1996 DYNAPAC WHEEL ROLLER CP132 | 726B036 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 300 | Equip # | Description | Serial # |
|------------|----------------|--------------------------------|-------------------|
| | 328 | 2014 DYNAPAC ROLLER CP142 | 10000500JOB003182 |
| | 349 | 1987 INGRAM 3 WHL ROLLER T12 | 578494-EB14 |
| | 350 | 1987 INGRAM 3 WHL ROLLER T12 | 578502-EB14 |
| | 351 | 03 INGRAM 3 WHEEL ROLLER AS314 | 901054 |
| | 364 | BOMAG BW120 ROLLER | 101170511714 |
| | 369 | 2011 DYNAPAC ROLLER CC524 | JOA006219 |
| 400 | | | |
| | 448 | 07 KUBOTA TRACTOR MX5000DT | 56955 |
| | 448B | BUSH HOG 6" | 12-07967 |
| | 449 | 06 KUBOTA TRACTOR B2630HSDF | 51165 |
| | 449A | 06 48" SQUEALER MOWER | 1219970 |
| | 451 | 04 KUBOTA TRACTOR M4900 | 53550 |
| | 451A | BUSH HOG MOWER 286 | 12-19380 |
| | 452 | 09 KUBOTA 4WD TRACTOR M954DDTC | 59318 |
| | 452A | BUSH HOG 3210 | 12-23642 |
| | 457 | 96 BROCE RC-300 BROOM | 87681 |
| | 458 | 98 WALDON SWEEPMASTER 250 | 25580 |
| | 459 | 99 BROCE RC350-52 BROOM | 89055 |
| | 460 | 04 LEEBOY R848 BROOM | 481041153 |
| | 461 | 07 LEEBOY BROOM RB48 | 42289 |
| | 462 | 08 LEEBOY BROOM RB48 | 51906 |
| | 463 | 02 BROCE RJ350 BROOM | 402315 |
| | 464 | 12 BROCE CTR350 BROOM | 407501 |
| | 465 | 2011 BLAW KNOX CB-90 BROOM | 72882 |
| | 501 | 05 BOBCAT SKID STEER LDR S220 | 526212716 |
| | 502 | 05 BOBCAT SKID STEER LDR A205 | 528411458 |
| | 503 | 05 S220 BOBCAT SKID STEER | 526214465 |
| | 503A | 08 HI FLOW PLANER | 231711716 |
| | 504 | 99 CAT 225B EXCAVATOR | 2ZD01605 |
| | 505 | USED BOBCAT LOADER S160 | 526716925 |
| | 505A | USED MOUNTED BREAKER | 000961 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 500 | Equip # | Description | Serial # |
|------------|----------------|--------------------------------------|----------------------|
| | 506 | 06 BOBCAT SKID STEER LDR T300 | 532012235 |
| | 506A | PALLET FORKS FOR 506 | |
| | 506B | 24" AUGER FOR 506 | |
| | 507 | 07 BOBCAT LOADER T300 | 532016305 |
| | 507A | BOBCAT ROOT GRAPPLE | B00212 |
| | 507B | BOBCAT BRUSHCAT CUTTER | B00212 |
| | 507C | BOBCAT AUGER | 506010 |
| | 508 | 99 JOHN DEER BACKHOE 410E | T0410EX838147 |
| | 509 | 07 BOBCAT LOADER W/BUCKET T300 | 532015797 |
| | 511 | 00 LINKBELT EXCAV 2800QEX | E6189281 |
| | 515 | 2003 BOBCAT EXCAVATOR 442A | 522311589 |
| | 516 | 99 KOMATSU WA-250-3 LDR | 53335 |
| | 516A | WA200 LOADER RAKE 105" | 0506-190195-1 |
| | 517 | 02 KOMATSU BACKHOE LOADER WB140-2 | F11633 |
| | 517A | TRAMAC 140 HAMMER | 139991 |
| | 518 | 08 CAT TERRAIN LOADER 277C | CAT0277CCJWF00649 |
| | 519 | 2009 CAT 299C LOADER | CAT0299CPJSP00553 |
| | 520 | 2014 GRADALL EXCAVATOR XL3300 III | 3300000751/8065-6007 |
| | 522 | 03 KOMATSU WA 250-5 LOADR | A73038 |
| | 523 | 03 KOMATSU WB140-2N COMBO | A20189 |
| | 524 | 03 KOMATSU EXCAVATOR PL 3 PC-300LC-7 | A85015 |
| | 525A | BOBCAT TILLER 68' | 054700894 |
| | 526 | 2014 VOLVO EXCAVATOR ECR235DL | 0381 |
| | 527 | 2013 KOMATSU WHEEL LOADER WA380-7 | A64350 |
| | 528 | 04 KOMATSU WA-380-5 LOADR | A52348 |
| | 529 | 05 KOMATSU BACKHOE LOADER WB140-2 | KMTWB001L36A21244 |
| | 530 | 13 VOLVO WHEEL EXCAVATOR EQ180D | 220212 |
| | 535 | 11 CATERPILLAR BACKHOE LOADR 420E | CAT0420ETDAN01303 |
| | 537 | 03 KOMASTSU BACKHOE LOADR WB140-2 | A20087 |
| | 538 | 04 CATERPILLAR BACKHOE LOADR 420D | CAT0420DVFPD20732 |
| | 539 | 09 KOMATSU BACKHOE LDR WB146 | KMTWB016K36A24213 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 500 | Equip # | Description | Serial # |
|------------|----------------|-----------------------------------|-------------------|
| | 540 | KOMATSU WHEEL LOADERS WA250-5L | KMTWA055J57A74354 |
| | 540A | FORKS ATTACHED TO 540 | |
| | 541 | KOMATSU WHEEL LDR WA250-5 | KMTWA055C57A74355 |
| | 542 | KOMATSU WA250-5L LOADER | KMTWA055L57A73906 |
| | 544 | 2005 KOMATSU WA250 WHLR L | KMTWA055K57A73476 |
| | 545 | 05 CAT 938G WHEEL LOADER | CAT0938GCRTB01672 |
| | 546 | 05 CAT 938G WHEEL LOADER | CAT0938GPCRD01426 |
| | 548 | 2013 BOBCAT SKID STEER LD S630 | A3NT17075 |
| | 548A | BOBCAT SWEEPER | A9T600369 |
| | 548B | 2015 BOBCAT 18" PLANER HIGH FLOW | M7018 |
| | 549 | 2013 BOBCAT S630 SKID STE | A3NT16510 |
| | 549A | BOBCAT SWEEPER | 714429721 |
| | 550 | 2011 BOBCAT SKID LOADER S650 | A3NV11560 |
| | 550B | 2013 CAT SWEEPER BROOM | EQ0028605 |
| | 551 | 2011 BOBCAT SKID LOADER S650 | A3NV13049 |
| | 551A | 72' SWEEPER | 6707837 |
| | 551B | 2010 BC HIFLOW MELROE PLA | 231713323 |
| | 552 | 2011 KUBOTA LDR SVL90C | 10267 |
| | 552A | MOWER DECK | |
| | 553 | JCB SKID STEER LOADER 320T | GEO320TVAB1747102 |
| | 554 | 2012 BOBCAT S650 SKID STEER LDR | A3NV15850 |
| | 555 | 2016 KUBOTA TRACK SKID STEER LD | 30810 |
| | 559A | 88 CLEARING RAKE - 950 | |
| | 563 | 88 CAT WHEEL LOADER 966C | 76J5660 |
| | 571 | 07 JOHN DEERE 310J BACKHOE LOADER | T0310JX158444 |
| | 572 | 07 JOHN DEERE 310J BACKHOE LOADER | T0310JX138847 |
| | 594 | 1978 950 CAT LOADER | 43J10338 |
| | SEC19 | 79 SKID STEER LOADER RAKE | |
| | SE103 | 98 JOHN DEERE 244H LDR | T6244HX000078 |
| 600 | | | |
| | 672 | USED KOMATSU D-61P DOZER | B1926 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 600 | Equip # | Description | Serial # |
|------------|----------------|-----------------------------------|-------------------|
| | 673 | 01 KOMATSU D41P-6 DOZER | B21604 |
| | 675 | 04 KOMATSU D-41P DOZER | B21359 |
| | 676 | 2013 CAT TRACTOR P5K2LGP | KYY00157 |
| | SE108 | 99 KOMATSU D31P-20 DOZER | 48766 |
| 700 | | | |
| | 770 | 04 HUBER MAINTAINER M850C | M850C02UEM1041 |
| | 776 | HENRY DICK ROAD WIDENER HDBT-4 | |
| | 780 | 02 CATERPILLAR GRADER 12H | 4XM02508 |
| | 781 | CATERPILLAR 12G GRADER | 61M12336 |
| | 783 | 96 REX SOIL STABILIZER HDS | HK427 |
| | 784 | 2011 TEREX RECLAIMER/STAB RS350 | 560216 |
| 800 | | | |
| | 830 | 94 MIDLAND ROAD WIDENER WA | 234 |
| | 831 | 07 CAT AP800D ASP PAVER | A5P00206 |
| | 835 | CAT ASPHALT PAVER AP800D | CATAP800EA5P00212 |
| | 836 | 09 CAT ASPHALT PAVER AP1000D | EAD00332 |
| | 839 | 05 CAT PAVER AP1000B | CATAP100JAGP00200 |
| | 840 | 14 CAT PAVER AP1000E | T1F00260 |
| | 841 | 14 CAT PAVER AP600D | TFZ00332 |
| 900 | | | |
| | 936 | 90 CORE DRILL/HMD TRL | |
| | 947 | 90 ASPHALT HEATER | |
| | 951 | 89 1 1/2 YD CONCRETE BKT | |
| | 954 | 90 CLAMSHELL BUCKET 1 C.Y | |
| | 957 | 08 ROLLING STRAIGHTEGE | |
| | 971 | 89 LISTER GENERATOR | 39524TS2E25004 |
| | 971A | 24"" DW BASETANK | 123940 |
| | 981 | 04 CASE 588G FORKLIFT | JG0291482 |
| | 982 | 07 TOYOTA FORKLIFT 8FGCU25 4500LB | 14004 |
| | 1000 | 93 360000 BTU PRTBL PATCH | 12049 |
| | 1001 | 99 VOLVO FORKS | C397-F420 |

City of Fort Lauderdale
Weekley Asphalt Paving, Inc.
Equipment List

12679-623

| 900 | Equip # | Description | Serial # |
|------------|----------------|-----------------------------------|-------------------|
| | 1002 | 08 DIXIE CHOPPER | 8078660 |
| | 1003 | KUBOTA ZERO TURN MOWER W/60" DECK | 12233 |
| | 1005 | AIR COMPRESSOR MODEL 210 | 19544A |
| | 1007 | 03 POLARIS 4X4 | 4XARD50A32D151645 |
| | 1010 | 07 BAD BOY BUGGY | BBE514B3875004069 |
| | 1011 | 2010 POLARIS | 4XAWH76A1A2160252 |
| | 1013 | TILLER | LPQRTA3576 |
| | 1021 | MAGNUM LIGHT TOWER | S/N 030658 |
| | 1022 | WACKER LIGHT PLANT | S/N 5257650 |
| | 1025 | TRL MOUNTED PRESSURE CLNR | |
| | MH01 | 04WESTFIELD MOBILE HOME | GAFL307A51509WW31 |
| | WAP76 | ASPHALT CURBER | 521 |
| | WAP85 | PRO MAC WALK BEHIND SAW | 11016511 |
| | WAP86 | 05 TARGET WALK BEHIND SAW | 000000429260 |
| | BR001 | STORAGE TRAILER - 20' | OCS-230 |
| | BR027 | LINK BELT PILE HAMMER 520 | 520835 |



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

BID NO. 12679-623
FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP
AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS
(P12708)

ADDENDUM NO. 1

ISSUED: May 12, 2022

This Addendum is being issued to provide the following information. It is hereby made a part of the Plans and Specifications and shall be included with all contract documents.

Acknowledge receipt of this Addendum by inserting its number and date on the CITB Construction Bid Certification Page.

DELETE: Construction Safety & Phasing Plan, Appendix A
Delete the drawing plans in Appendix A of the Construction Safety and Phasing Plan, and replace with the attached.

All other terms, conditions, and specifications remain unchanged.

Maureen Lewis, MBA, P2P03
Senior Procurement Specialist

Company Name: Weekley Asphalt Paving, Inc.
(please print)

Bidder's Signature: *[Signature]*
Daniel D. Weekley, President

Date: 05/17/2022



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

BID NO. 12679-623
FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP
AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS
(P12708)

ADDENDUM NO. 2

ISSUED: June 6, 2022

This Addendum is being issued to provide the following information. It is hereby made a part of the Plans and Specifications and shall be included with all contract documents.

Acknowledge receipt of this Addendum by inserting its number and date on the CITB Construction Bid Certification Page.

REPLACE: Technical Specifications 012900 – Payment Procedures

Delete Page 1 of the above technical specifications and replace with the attached. Part 1.2(D)(1) has been revised.

All other terms, conditions, and specifications remain unchanged.

Maureen Lewis, MBA, P203
Senior Procurement Specialist

Company Name: Weekley Asphalt Paving, Inc.
(please print)

Bidder's Signature: Daniel D. Weekley, Resident

Date: 6/6/2022



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

BID NO. 12679-623
FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP
AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS
(P12708)

ADDENDUM NO. 3

ISSUED: June 14, 2022

This Addendum is being issued to provide the following information. It is hereby made a part of the Plans and Specifications and shall be included with all contract documents.

Acknowledge receipt of this Addendum by inserting its number and date on the CITB Construction Bid Certification Page.

REVISED: Sheet S01 in the Plan Set has been revised to remove the note referencing an approved blast fence manufacturer.

All revisions are clouded and marked as Addendum 3.

All other terms, conditions, and specifications remain unchanged.

Maureen Lewis, MBA, P2003
Senior Procurement Specialist

Company Name: Weekley Asphalt Paving, Inc.
(please print)

Bidder's Signature: *[Signature]*
Daniel B. Weekley, President

Date: 6/14/2022



CERTIFICATE OF LIABILITY INSURANCE

 DATE (MM/DD/YYYY)
5/25/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| PRODUCER Commercial Lines - (305) 443-4886 USI Insurance Services LLC 2601 South Bayshore Drive, Suite 1600 Coconut Grove, FL 33133 | | CONTACT NAME: Francys Tolon PHONE (A/C, No, Ext): 786.785.1126 E-MAIL ADDRESS: francys.tolon@usi.com FAX (A/C, No): 786.264.9232 | | | | | | | | | | | | | | | |
|--|--------|---|--|---------|--------|---|-------|---|--|--|-------|---|-------|------------|--|------------|--|
| INSURED Weekley Asphalt Paving, Inc. 20701 Stirling Road Pembroke Pines FL 33332 | | INSURER(S) AFFORDING COVERAGE <table border="1"> <tr> <th>INSURER</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A: Old Republic Insurance Company</td> <td>24147</td> </tr> <tr> <td>INSURER B: Certain Underwriters at Lloyds of London</td> <td></td> </tr> <tr> <td>INSURER C: AGCS Marine Insurance Company</td> <td>22837</td> </tr> <tr> <td>INSURER D: Axis Surplus Insurance Company</td> <td>26620</td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table> | | INSURER | NAIC # | INSURER A: Old Republic Insurance Company | 24147 | INSURER B: Certain Underwriters at Lloyds of London | | INSURER C: AGCS Marine Insurance Company | 22837 | INSURER D: Axis Surplus Insurance Company | 26620 | INSURER E: | | INSURER F: | |
| INSURER | NAIC # | | | | | | | | | | | | | | | | |
| INSURER A: Old Republic Insurance Company | 24147 | | | | | | | | | | | | | | | | |
| INSURER B: Certain Underwriters at Lloyds of London | | | | | | | | | | | | | | | | | |
| INSURER C: AGCS Marine Insurance Company | 22837 | | | | | | | | | | | | | | | | |
| INSURER D: Axis Surplus Insurance Company | 26620 | | | | | | | | | | | | | | | | |
| INSURER E: | | | | | | | | | | | | | | | | | |
| INSURER F: | | | | | | | | | | | | | | | | | |

COVERAGES **CERTIFICATE NUMBER: 15548942** **REVISION NUMBER: See below**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL SUBR INSD WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|---|--------------------|----------------|-------------------------|-------------------------|---|
| A | COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER: | X | MWZY 312426 22 | 3/1/2022 | 3/1/2023 | EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$ |
| A | AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY | | MWTB 312425 22 | 3/1/2022 | 3/1/2023 | COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ |
| B | UMBRELLA LIAB <input type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTIONS | | SCX1011422 | 3/1/2022 | 3/1/2023 | EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$ |
| A | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below | Y/N Y | MWC 312427 22 | 3/1/2022 | 3/1/2023 | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000 |
| C | Leased & Rented Equipment | | MXI93071287 | 3/1/2022 | 3/1/2023 | L&R Equipment \$200,000 Deductible \$5,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Bid No: 12679-623 - City Project No. 12708 - FXE Runway 9 Run-up Area Relocation and SouthEnd Taxiway Intersection Improvements

City of Fort Lauderdale is listed as an additional insured with respects to the general liability policy. Waiver of subrogation applies in favor of the City of Fort Lauderdale with respects to the workers compensation coverage.

CERTIFICATE HOLDER

City of Fort Lauderdale
 100 N Andrews Avenue
 Fort Lauderdale, FL 33301

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

B. M. Cant

The ACORD name and logo are registered marks of ACORD © 1988-2015 ACORD CORPORATION. All rights reserved.

ACORD 25 (2016/03)

Client Code: WEEKLASP

SID: 15548942

Certificate of Insurance (Con't)**OTHER Coverage**

| INSR LTR | TYPE OF INSURANCE | ADDL INSR | WVD SUBR | POLICY NUMBER | EFFECTIVE DATE (MM/DD/YY) | EXPIRATION DATE (MM/DD/YY) | LIMIT |
|-------------|-------------------|--------------|-------------|-----------------|------------------------------|-------------------------------|--|
| D | Excess Liability | | | P00100078246701 | 3/1/2022 | 3/1/2023 | 3,000,000 Each Occurrence 3,000,000 Aggregate |

Certificate Of Insurance-Con't

QUESTIONNAIRE SHEET

PLEASE PRINT OR TYPE:

Firm Name: **WEEKLEY ASPHALT
PAVING, INC.**

President **Daniel D. Weekley**

Business Address: **20701 Stirling Road
Pembroke Pines, FL 33332**

Telephone: **954-680-8005**

Fax: **954-680-8671**

E-Mail Address:
danweekley@weekleyasp.com

What was the last project of this nature which you completed? Include the year, description, and contract value.

**Broward County HWO Dual Taxilane Access to Taxiway L. at North Perry Airport; 9/2021-1/2022;
\$283,512**

The following are named as three corporations and representatives of those corporations for which you have performed work similar to that required by this contract, and which the City may contact as your references (include addresses, telephone numbers and e-mail addresses). Include the project name, year, description, and contract value.

**City of Pembroke Pines, 601 City
Center Way, Pembroke Pines, FL 33025;
Karl Kennedy, City Engineer; PH: 954-
518-9040; kkennedy@ppines.com; SW
145TH AVE AND PINES BLVD
INTERSECTION IMPROVEMENTS, 2018,
\$218,282.51**

**City of Boca Raton, 201 W Palmetto
Park Rd, Boca Raton, FL 33432; Elsa
Tellez, Chief Construction Inspector,
PH: 561-239-0389, Email:
etellez@myboca.us; St. Andrews Blvd
Resurfacing and South Verde Trail
Right Turn Lanes, 2/2018, \$1,731,713.25
Town of Davie, 6591 Orange Dr., Davie,
FL 33314, Jonathan Vogt, PH: 954-797-
1137, Email: jonathan_vogt@davie-
fl.gov, Davie Road Phase II Roadway
Improvements, 2017-2018, \$2,380,020**

How many years has your organization been in business? **66**

Have you ever failed to complete work awarded to you; if so, where and why?

NO

The name of the qualifying agent for the firm and his position is: **WAYNE D. WEEKLEY, SECRETARY/TREASURER**

Certificate of Competency Number of Qualifying Agent: **78-581**

Effective Date: **08/31/2021** Expiration Date: **08/31/2023**

Licensed in: **BROWARD CO., FLORIDA** Engineering Contractor's License # **General Contractor No. CGC1518050**
(County/State)

Expiration Date:
08/31/2022

NOTE: To be considered for award of this contract, the bidder must submit a financial statement upon request.

NOTE: Contractor must have proper licensing and shall provide copy of same with his proposal.

QUESTIONNAIRE SHEET

1. Have you personally inspected the proposed work and have you a complete plan for its performance?
YES
2. Will you sublet any part of this work? If so, list the portions or specialties of the work that you will.
 - a) **Maintenance of Traffic**
 - b) **Airfield Lighting**
 - c) **Airfield Striping**
 - d)
 - e)
 - f)
 - g)
3. What equipment do you own that is available for the work?
SEE ATTACHMENT #1
4. What equipment will you purchase for the proposed work?
NONE
5. What equipment will you rent for the proposed work?
NONE

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and free from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME**RELATIONSHIPS**

N/A

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

Daniel D. Weekley
Authorized Signature

President
Title

Daniel D. Weekley
Name (Printed)

06/22/2022
Date

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Daniel D. Weekley
Authorized Signature

Daniel D. Weekley, President
Print Name and Title

06/22/2022
Date

CONSTRUCTION BID CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the Department of State, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration) **Weekley Asphalt Paving, Inc.**

Address: **20701 Stirling Road**

City: **Pembroke Pines** State: **FL** Zip: **33332**

Telephone No.: **954-680-8005** FAX No.: **954-680-8671** Email: **danweekley@weekleyasp.com**

Check box if your firm qualifies for MBE / SBE / WBE: ☐

If a corporation, state the name of the President, Secretary and Resident Agent. If a partnership, state the names of all partners. If a trade name, state the names of the individuals who do business under the trade name.

| | | | |
|----------------------------------|-------------------------------------|---------------------------------|--------------------------------|
| Daniel D. Weekley Name | President Title | Troy L. Weekley Name | Vice President Title |
| Wayne D. Weekley Name | Secretary/Treasurer Title | Wayne D. Weekley Name | Resident Agent Title |

ADDENDUM ACKNOWLEDGEMENT - Bidder acknowledges that the following addenda have been received and are included in the proposal:

| <u>Addendum No.</u> | <u>Date Issued</u> | <u>Addendum No.</u> | <u>Date Issued</u> | <u>Addendum No.</u> | <u>Date Issued</u> |
|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|
| 1 | 5/12/2022 | 2 | 6/6/2022 | 3 | 6/8/2022 |
| 4 | 6/14/2022 | | | | |

VARIANCES: If you take exception or have variances to any term, condition, specification, or requirement in this bid you must specify such variance in the space provided below or reference in the space provided below all variances contained on other pages within your bid. Additional pages may be attached if necessary. No variances will be deemed to be part of the bid submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. **You must also click the "Take Exception" button.**

N/A

The below signatory affirms that he has or will obtain all required permits and licenses from the appropriate agencies, and that his firm is authorized to do business in the State of Florida. The below signatory agrees to furnish all labor, tools, material, equipment and supplies, and to sustain all the expense incurred in doing the work set forth in strict accordance with the bid plans and contract documents at the unit prices indicated if awarded a contract. The below signatory has not divulged to, discussed, or compared this bid with other bidders, and has not colluded with any other bidder or parties to this bid whatsoever. Furthermore, the undersigned guarantees the truth and accuracy of all statements and answers contained in

this bid. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a bid, that in no event shall the City's liability for bidder's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Daniel D. Weekley
Name (printed)

06/22/2022
Date

Daniel D. Weekley
Signature

President
Title

Revised 4/28/2020

Solicitation 12679-623

FXE Runway 9 Run-up Area Relocation & SouthEnd Taxiway Intersection Improvements

Bid Designation: Public



City of Fort Lauderdale

Bid 12679-623
FXE Runway 9 Run-up Area Relocation & SouthEnd Taxiway Intersection Improvements

Bid Number 12679-623
Bid Title FXE Runway 9 Run-up Area Relocation & SouthEnd Taxiway Intersection Improvements

Bid Start Date May 10, 2022 8:48:39 AM EDT
Bid End Date Jun 22, 2022 2:00:00 PM EDT
Question & Answer End Date Jun 10, 2022 5:00:00 PM EDT

Bid Contact Maureen Lewis, MBA, CPPB
Senior Procurement Specialist
Finance
954-828-5239
maureenl@fortlauderdale.gov

Contract Duration One Time Purchase
Contract Renewal Not Applicable
Prices Good for 120 days

Bid Comments The City of Fort Lauderdale, Florida (City) is seeking bids from qualified bidders, for construction services in accordance with the terms, conditions, and specifications contained in this Invitation To Bid (ITB).

Sealed bids will be received electronically until 2:00 p.m. , local time, on THURSDAY, JUNE 9, 2022, and opened online immediately thereafter in the 5th Floor Conference Room, City Hall, 100 North Andrews Avenue, Fort Lauderdale, Florida 33301, for BID NO., 12679-623, PROJECT NO., 12708, FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION IMPROVEMENTS.

All openings will be held on the BIDSYNC.COM platform. Once the Procurement Specialist opens the solicitation, the bid tabulations may be viewed immediately on a computer, laptop, cell phone, or any other device with WiFi access.

Anyone requesting assistance or having further inquiry in this matter must contact the Procurement Specialist indicated on the solicitation, via the Question and Answer (Q&A) platform on Bidsync.com before the Last Day for Questions indicated in the Solicitation.

This Project is located at Fort Lauderdale Executive Airport in the City of Fort Lauderdale. The work includes, but is not limited to, relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage. The project also includes the re-alignment of taxiways Echo and Juliet on the southern end of Runway 9. The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping and sodding, as well as installation of LED edge-lights and guidance signs.

Drawing Plans: This Project consists of Drawing File No., 4-143-40, seventy-four (74) sheets. Drawing plans may be obtained free of charge at BIDSYNC.COM.

Licensing Requirements: Possession of a General Contractor license or an Electrical Contractor license issued by the Florida Department of Business and Professional Regulation is acceptable for the prime contractor. However, the non-electrical portion of the work must be performed by a General Contractor.

NOTE: Payment on this contract will be made by Check.

Pre-Bid Meeting/Site Visit: There will not be a pre-bid meeting or site visit for this Invitation to Bid.

However, it will be the sole responsibility of the bidder to inspect the City's location(s)/facilities and become familiar with the scope of the City's requirements and systems prior to submitting a proposal. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a proposal will be considered evidence that the proposer has familiarized himself with the nature and extent of the work, equipment, materials, and labor required.

Bid Security : A certified check, cashier's check, bank officer's check or bid bond for **FIVE** percent (5%) of the bid amount, made payable to the City of Fort Lauderdale, Florida, shall accompany each offer.

Bid Bonds:

Bidders can submit bid bonds for projects four different ways.

1) BidSync allows bidders to submit bid bonds electronically directly through their system using Surety 2000. For more information on this feature and to access it, contact BIDSINC customer care department.

2) Bidders may upload their original executed bid bond on BIDSINC to accompany their electronic bids and deliver the original, signed and sealed hard copy within five (5) business days after bid opening, with the company name, bid number and title clearly indicated.

3) Bidders can hand deliver their bid bond in a sealed envelope to the Finance Department, Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, Florida 33301-1016, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope.

4) Bidders can mail their bid bond to the Finance Department, Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, Florida 33301-1016, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope. NOTE: Bond must be received in Procurement and time stamped before bid opening.

It will be the sole responsibility of the bidder to ensure that his bid is submitted prior to the bid opening date and time listed. **PAPER BID SUBMITTALS WILL NOT BE ACCEPTED. BIDS MUST BE SUBMITTED ELECTRONICALLY VIA BIDSINC.COM**

Certified Checks, Cashier's Checks and Bank Drafts :

These **CANNOT** be submitted via BIDSINC, nor are their images allowed to be uploaded and submitted with your electronic bid. These forms of securities, as well as hard copy bid bonds, must be received on or before the Invitation to Bid (ITB) opening date and time, at the Finance Department, Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, Florida 33301-1016, with the bid number and title clearly indicated on the envelope.

It is the bidder's sole responsibility to ensure that his bid bond or other bid security is received by the Procurement Services Division before time of bid opening. Failure to adhere to this requirement may be grounds to consider the bid as non-responsive.

The City of Fort Lauderdale reserves the right to waive any informality in any or all bids and to reject any or all bids.

For information concerning technical specifications, please utilize the Q&A platform provided by BIDSINC at www.bidsync.com. Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures, will only be transmitted by written addendum. (See addendum section of BIDSINC Site). **Bidders please note:** No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the bidder has familiarized himself with the nature and extent of the work, equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation.

Added on May 12, 2022:

Appendix A, the drawing plans in the Construction Safety and Phasing Plan document, have been replaced.

Added on Jun 6, 2022:

Part 1.2 of Technical Specifications 012900, Payment Procedures, has been revised.

Added on Jun 8, 2022:

Bid Opening date, and Q&A date have been extended.

Added on Jun 14, 2022:

Plan Sheet S01 has been revised.

Addendum # 1

New Documents P12708_ADDENDUM 1 5-12-2022.pdf

Addendum # 2

New Documents P12708.ADDENDUM NO. 2 6-6-2022.pdf

Addendum # 3

| | | | |
|-------------------------|----------------------------|--------------------|-----------------------------|
| Previous End Date | Jun 9, 2022 2:00:00 PM EDT | New End Date | Jun 22, 2022 2:00:00 PM EDT |
| Previous Q & A End Date | Jun 2, 2022 5:00:00 PM EDT | New Q & A End Date | Jun 10, 2022 5:00:00 PM EDT |

Addendum # 4

New Documents P12708_ADDENDUM No. 3 6-14-2022.pdf

Item Response Form

Item **12679-623-01-01 - BASE BID: CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1)**

Lot Description **BASE BID**

Quantity **1 ls**

Unit Price

Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
 See ITB Specifications
 Fort Lauderdale FL 33301
Qty 1

Description
 CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

Item **12679-623-01-02 - BASE BID: TEMPORARY AIR AND WATER POLLUTION SOIL EROSION AND SILTATION CONTROL (C-102-5.1)**

Lot Description **BASE BID**

Quantity **1 ls**

Unit Price

Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
 See ITB Specifications
 Fort Lauderdale FL 33301
Qty 1

Description
 TEMPORARY AIR AND WATER POLLUTION SOIL EROSION AND SILTATION CONTROL

Item **12679-623-01-03 - BASE BID: MOBILIZATION (C-105-6.1)**

Lot Description **BASE BID**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

MOBILIZATION - INCLUDE DEMOBILIZATION AND SHALL NOT EXCEED 10% OF TOTAL PROJECT COST PER C-105.

Item **12679-623-01-04 - BASE BID: AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC (S-102-5.1)**
Lot Description **BASE BID**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC

Item **12679-623-01-05 - BASE BID: TEMPORARY FENCE FOR OWL TORTOISE NESTS (S-102-5.2)**
Lot Description **BASE BID**
Quantity **10 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 10

Description

TEMPORARY FENCE FOR OWL TORTOISE NESTS

Item **12679-623-01-06 - BASE BID: PROJECT SURVEY AND STAKEOUT (S-103-5.1)**
Lot Description **BASE BID**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

PROJECT SURVEY AND STAKEOUT

Item **12679-623-01-07 - BASE BID: BLAST FENCE (S-108-5.1)**

Lot Description **BASE BID**

Quantity **1 ls**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description
BLAST FENCE

Item **12679-623-01-08 - BASE BID: FULL DEPTH ASPHALT PAVEMENT REMOVAL (P-101-5.1)**

Lot Description **BASE BID**

Quantity **9500 sy**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 9500

Description
FULL DEPTH ASPHALT PAVEMENT REMOVAL

Item **12679-623-01-09 - BASE BID: BITUMINOUS PAVEMENT MILLING (MAX 2 IN) (P-101-5.2)**

Lot Description **BASE BID**

Quantity **4780 sy**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 4780

Description
BITUMINOUS PAVEMENT MILLING (MAX 2 IN)

Item **12679-623-01-10 - BASE BID: ASPHALT PAVEMENT SURFACE REMOVAL (P-101-5.3)**

Lot Description **BASE BID**

Quantity **4720 sy**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications

Fort Lauderdale FL 33301

Qty 4720

Description

ASPHALT PAVEMENT SURFACE REMOVAL

Item 12679-623-01-11 - BASE BID: CONCRETE FOUNDATION REMOVAL (P-101-5.4)**Lot Description BASE BID****Quantity 430 sy****Unit Price****Delivery Location City of Fort Lauderdale**See ITB Specifications

See ITB Specifications

Fort Lauderdale FL 33301

Qty 430**Description**

CONCRETE FOUNDATION REMOVAL

Item 12679-623-01-12 - BASE BID: ASPHALT PAVEMENT REMOVAL AND PARTIAL LIMEROCK REMOVAL (P-101-5.5)**Lot Description BASE BID****Quantity 1230 sy****Unit Price****Delivery Location City of Fort Lauderdale**See ITB Specifications

See ITB Specifications

Fort Lauderdale FL 33301

Qty 1230**Description**

ASPHALT PAVEMENT REMOVAL AND PARTIAL LIMEROCK REMOVAL

Item 12679-623-01-13 - BASE BID: CRACK SEALING (P-101-5.6)**Lot Description BASE BID****Quantity 3000 lf****Unit Price****Delivery Location City of Fort Lauderdale**See ITB Specifications

See ITB Specifications

Fort Lauderdale FL 33301

Qty 3000**Description**

CRACK SEALING

Item 12679-623-01-14 - BASE BID: REMOVAL SALVAGE AND RELOCATION OF NON ELECTRICAL AIRPORT SIGNAGE (P-101-5.7)**Lot Description BASE BID****Quantity 8 ea****Unit Price**

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 8

Description
REMOVAL SALVAGE AND RELOCATION OF NON ELECTRICAL AIRPORT SIGNAGE

Item **12679-623-01-15 - BASE BID: BLAST FENCE REMOVAL (P-101-5.8)**
Lot Description **BASE BID**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description
BLAST FENCE REMOVAL

Item **12679-623-01-16 - BASE BID: UNCLASSIFIED EXCAVATION (P-152-4.1)**
Lot Description **BASE BID**
Quantity **4200 cy**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 4200

Description
UNCLASSIFIED EXCAVATION

Item **12679-623-01-17 - BASE BID: EMBANKMENT (P-152-4.2)**
Lot Description **BASE BID**
Quantity **2000 cy**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 2000

Description
EMBANKMENT

Item **12679-623-01-18 - BASE BID: UTILITY SOFT DIG (P-152-4.3)**
Lot Description **BASE BID**

Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description
UTILITY SOFT DIG

Item **12679-623-01-19 - BASE BID: SUBBASE COURSE (12 IN THICK) (P-154-5.1)**
Lot Description **BASE BID**
Quantity **9800 sy**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 9800

Description
SUBBASE COURSE (12 IN THICK)

Item **12679-623-01-20 - BASE BID: SUBBASE COURSE SHOULDER (6 IN THICK) (P-154-5.2)**
Lot Description **BASE BID**
Quantity **8020 sy**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 8020

Description
SUBBASE COURSE SHOULDER (6 IN THICK)

Item **12679-623-01-21 - BASE BID: LIME ROCK BASE COURSE (9 IN THICK) (P-211-5.1)**
Lot Description **BASE BID**
Quantity **11800 sy**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 11800

Description
LIME ROCK BASE COURSE (9 IN THICK)

Item **12679-623-01-22 - BASE BID: LIME ROCK BASE COURSE (VARIABLE THICKNESS 0 IN TO 4 IN THICK) (P-211-5.3)**

Lot Description **BASE BID**

Quantity **4710 sy**

Unit Price

Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 4710

Description
LIME ROCK BASE COURSE (VARIABLE THICKNESS 0 IN TO 4 IN THICK)

Item **12679-623-01-23 - BASE BID: LIME ROCK TRANSITION WEDGE (P-211-5.4)**

Lot Description **BASE BID**

Quantity **2200 lf**

Unit Price

Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 2200

Description
LIME ROCK TRANSITION WEDGE

Item **12679-623-01-24 - BASE BID: HOT MIXED ASPHALT PAVEMENT (SURFACE) (P-401-8.1)**

Lot Description **BASE BID**

Quantity **4500 ton**

Unit Price

Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 4500

Description
HOT MIXED ASPHALT PAVEMENT (SURFACE)

Item **12679-623-01-25 - BASE BID: HOT MIXED ASPHALT PAVEMENT (LEVELING) (P-403-8.1)**

Lot Description **BASE BID**

Quantity **350 ton**

Unit Price

Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 350

Description

HOT MIXED ASPHALT PAVEMENT (LEVELING)

| | |
|-------------------|---|
| Item | 12679-623-01-26 - BASE BID: PRIME COAT (P-602-5.1) |
| Lot Description | BASE BID |
| Quantity | 4950 gallon |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 4950 |
| Description | PRIME COAT |

| | |
|-------------------|---|
| Item | 12679-623-01-27 - BASE BID: TACK COAT (P-603-5.1) |
| Lot Description | BASE BID |
| Quantity | 2520 gallon |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 2520 |
| Description | TACK COAT |

| | |
|-------------------|--|
| Item | 12679-623-01-28 - BASE BID: REINFORCED CONCRETE FOUNDATION FOR BLAST FENCE (P-610-6.1) |
| Lot Description | BASE BID |
| Quantity | 225 cy |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 225 |
| Description | REINFORCED CONCRETE FOUNDATION FOR BLAST FENCE |

| | |
|-------------------|---|
| Item | 12679-623-01-29 - BASE BID: PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS (YELLOW WHITE) (P-620-5.1) |
| Lot Description | BASE BID |
| Quantity | 7920 sf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications |

See ITB Specifications
Fort Lauderdale FL 33301
Qty 7920

Description

PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS (YELLOW AND WHITE)

| | |
|-------------------|---|
| Item | 12679-623-01-30 - BASE BID: PERMANENT AIRFIELD PAINTING WITH TYPE I GLASS BEADS (RED) (P-620-5.2) |
| Lot Description | BASE BID |
| Quantity | 850 sf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 850 |

Description

PERMANENT AIRFIELD PAINTING WITH TYPE I GLASS BEADS (RED)

| | |
|-------------------|---|
| Item | 12679-623-01-31 - BASE BID: PERMANENT AIRFIELD PAINTING WITH NO GLASS BEADS (BLACK) (P-620-5.3) |
| Lot Description | BASE BID |
| Quantity | 14550 sf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 14550 |

Description

PERMANENT AIRFIELD PAINTING WITH NO GLASS BEADS (BLACK)

| | |
|-------------------|--|
| Item | 12679-623-01-32 - BASE BID: TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS (YELLOW WHITE) (P-620-5.4) |
| Lot Description | BASE BID |
| Quantity | 7920 sf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 7920 |

Description

TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS (YELLOW WHITE)

| | |
|-----------------|--|
| Item | 12679-623-01-33 - BASE BID: TEMPORARY AIRFIELD PAINTING WITH NO GLASS BEADS (RED) (P-620-5.5) |
| Lot Description | BASE BID |
| Quantity | 850 sf |

Unit Price

Delivery Location

City of Fort LauderdaleSee ITB SpecificationsSee ITB Specifications

Fort Lauderdale FL 33301

Qty 850**Description**

TEMPORARY AIRFIELD PAINTING WITH NO GLASS BEADS (RED)

Item**12679-623-01-34 - BASE BID: AIRFIELD PAINT REMOVAL (P-620-5.6)**

Lot Description

BASE BID

Quantity

650 sf

Unit Price

Delivery Location

City of Fort LauderdaleSee ITB SpecificationsSee ITB Specifications

Fort Lauderdale FL 33301

Qty 650**Description**

AIRFIELD PAINT REMOVAL

Item**12679-623-01-35 - BASE BID: SODDING (T-904-5.1)**

Lot Description

BASE BID

Quantity

8720 sy

Unit Price

Delivery Location

City of Fort LauderdaleSee ITB SpecificationsSee ITB Specifications

Fort Lauderdale FL 33301

Qty 8720**Description**

SODDING

Item**12679-623-01-36 - BASE BID: HYDROSEEDING (S-906-5.1)**

Lot Description

BASE BID

Quantity

14790 sy

Unit Price

Delivery Location

City of Fort LauderdaleSee ITB SpecificationsSee ITB Specifications

Fort Lauderdale FL 33301

Qty 14790**Description**

HYDROSEEDING

Item**12679-623-01-37 - BASE BID: HAND EXCAVATE MINIMUM 8 IN WIDE X 28 IN DEEP IN EARTH (L-108-5.1)**

Lot Description **BASE BID**
Quantity **25 lf**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 25

Description
HAND EXCAVATE MINIMUM 8 IN WIDE X 28 IN DEEP IN EARTH

Item **12679-623-01-38 - BASE BID: SAWCUT HAND EXCAVATE MIN 8 IN WIDE 28 IN DEEP IN EXIST FULL PAVEMENT (L-108-5.2)**

Lot Description **BASE BID**
Quantity **25 lf**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 25

Description
SAWCUT HAND EXCAVATE MIN 8 IN WIDE 28 IN DEEP IN EXIST FULL PAVEMENT

Item **12679-623-01-39 - BASE BID: 3 QUARTER IN X 20 FT GROUND RODS CONNECTED TO COUNTERPOISE (L-108-5.3)**

Lot Description **BASE BID**
Quantity **26 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 26

Description
3 QUARTER IN X 20 FT GROUND RODS CONNECTED TO COUNTERPOISE

Item **12679-623-01-40 - BASE BID: 10 FT ADDITIONAL GROUND ROD SECTIONS (L-108-5.4)**

Lot Description **BASE BID**
Quantity **26 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 26

Description

10 FT ADDITIONAL GROUND ROD SECTIONS

| | |
|-------------------|---|
| Item | 12679-623-01-41 - BASE BID: NO6 BRE SLD AWG CPOISE COND INSTALLED OVER CONDUIT SYSTEM (L-108-5.5) |
| Lot Description | BASE BID |
| Quantity | 7300 lf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 7300 |

Description
NO6 BRE SLD AWG CPOISE COND INSTALLED OVER CONDUIT SYSTEM

| | |
|-------------------|--|
| Item | 12679-623-01-42 - BASE BID: NO8 5KV L-824 COND INSTAL IN NEW AND EXIST CONDUIT DUCTBANK SYSTEM (L-108-5.6) |
| Lot Description | BASE BID |
| Quantity | 13900 lf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 13900 |

Description
NO8 5KV L-824 COND INSTAL IN NEW AND EXIST CONDUIT DUCTBANK SYSTEM

| | |
|-------------------|---|
| Item | 12679-623-01-43 - BASE BID: 1 2IN SCHED 40 PVCCOND NON ENC DB INEARTH 24IN MIN CVR CMPLT INPLACE (L-110-5.1) |
| Lot Description | BASE BID |
| Quantity | 6400 lf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 6400 |

Description
1 2IN SCHED 40 PVCCOND NON ENC DB INEARTH 24IN MIN CVR CMPLT INPLACE

| | |
|-----------------|--|
| Item | 12679-623-01-44 - BASE BID: 1 2INSCHED40PVCCOND CONCNCND INST IN NEWFULLSTRNGTHPVM24INMINCVRCOMPIN PLACE (L |
| Lot Description | BASE BID |
| Quantity | 975 lf |
| Unit Price | |

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 975

Description
1 2INSCHED40PVCCONDCONCENCND INST IN NEWFULLSTRNGTHHPVMT24INMINCVRCOMPIN PLACE

Item **12679-623-01-45 - BASE BID: 1 2INSCHED40PVCCONDCONCENCND INST IN EXISTFULLSTRNGTHHPVMT24INMINCVRCMPLTINPLCE (**

Lot Description **BASE BID**

Quantity **95 lf**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 95

Description
1 2INSCHED40PVCCONDCONCENCND INST IN EXISTFULLSTRNGTHHPVMT24INMINCVRCMPLTINPLCE

Item **12679-623-01-46 - BASE BID: INTERCEPT EXIST CONDUIT SYSTEM AND CONNECT TO NEW CONDUIT SYSTEM (L-110-5.4)**

Lot Description **BASE BID**

Quantity **20 ea**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 20

Description
INTERCEPT EXIST CONDUIT SYSTEM AND CONNECT TO NEW CONDUIT SYSTEM

Item **12679-623-01-47 - BASE BID: HAND EXCAVATE AND CONCRETE ENCASE EXIST 1W2 IN CONDUIT COMPLETE (L-110-5.5)**

Lot Description **BASE BID**

Quantity **550 lf**

Unit Price

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 550

Description
HAND EXCAVATE AND CONCRETE ENCASE EXIST 1W2 IN CONDUIT COMPLETE

| | |
|-------------------|---|
| Item | 12679-623-01-48 - BASE BID: HAND EXCAVATE AND CONCRETE ENCASE EXIST 2W4 IN CONDUIT COMPLETE (L-110-5.6) |
| Lot Description | BASE BID |
| Quantity | 110 lf |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 110 |

Description
HAND EXCAVATE AND CONCRETE ENCASE EXIST 2W4 IN CONDUIT COMPLETE

| | |
|-------------------|---|
| Item | 12679-623-01-49 - BASE BID: L 867 16 IN DIAMETER JUNCTION CAN WITH COVER INSTALLED IN EARTH (L-115-5.1) |
| Lot Description | BASE BID |
| Quantity | 1 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 1 |

Description
L 867 16 IN DIAMETER JUNCTION CAN WITH COVER INSTALLED IN EARTH

| | |
|-------------------|---|
| Item | 12679-623-01-50 - BASE BID: L 867 16 IN DIAMETER BOTTOMLESS 2 CAN JCP INSTALL IN EARTH (L-115-5.2) |
| Lot Description | BASE BID |
| Quantity | 2 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 2 |

Description
L 867 16 IN DIAMETER BOTTOMLESS 2 CAN JCP INSTALL IN EARTH

| | |
|-------------------|--|
| Item | 12679-623-01-51 - BASE BID: INTER EXISTLIGHT CAN IN EARTH EXIST PVEMNT CONNECT TO CONDUIT SYSTEM(L-115-5.3) |
| Lot Description | BASE BID |
| Quantity | 5 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications |

Fort Lauderdale FL 33301

Qty 5**Description**

INTER EXISTLIGHT CAN IN EARTH EXIST PVEMNT CONNECT TO CONDUIT SYSTEM

| | |
|-------------------|---|
| Item | 12679-623-01-52 - BASE BID: REMOV OF EXIST JC LIGHT BASE CAN IN EARTH COMPLETE (L-115-5.4) |
| Lot Description | BASE BID |
| Quantity | 110 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 110 |

Description

REMOV OF EXIST JC LIGHT BASE CAN IN EARTH COMPLETE

| | |
|-------------------|---|
| Item | 12679-623-01-53 - BASE BID: REMOV OF EXIST JC LIGHT BASE CAN IN EXISTING PAVEMENT COMPLETE (L-115-5.5) |
| Lot Description | BASE BID |
| Quantity | 9 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 9 |

Description

REMOV OF EXIST JC LIGHT BASE CAN IN EXISTING PAVEMENT COMPLETE

| | |
|-------------------|---|
| Item | 12679-623-01-54 - BASE BID: REMOVAL OF EXISTING 2 CAN JUNCTION CAN PLAZA IN EARTH, COMPLETE (L-115-5.6) |
| Lot Description | BASE BID |
| Quantity | 1 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 1 |

Description

REMOVAL OF EXISTING 2 CAN JUNCTION CAN PLAZA IN EARTH, COMPLETE

| | |
|-----------------|---|
| Item | 12679-623-01-55 - BASE BID: L861T(L) LED TAXI ELEV EDGE LIGHT AND NEW BASE INSTAL IN EARTH (L-125-5.1) |
| Lot Description | BASE BID |

Quantity **30 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 30

Description
L861T(L) LED TAXI ELEV EDGE LIGHT AND NEW BASE INSTAL IN EARTH

Item **12679-623-01-56 - BASE BID: RELOL861T(L) LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN EARTH(L-125-5.2)**
Lot Description **BASE BID**
Quantity **95 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 95

Description
RELOL861T(L) LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN EARTH

Item **12679-623-01-57 - BASE BID: RELOL861T(L) LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN NEW PVMT(L-125-5.3)**
Lot Description **BASE BID**
Quantity **5 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 5

Description
RELOL861T(L) LED TAXI ELEV EDGE LIGHT WITH NEW BASE INSTAL IN NEW PVMT

Item **12679-623-01-58 - BASE BID: RELOL861T(L) LED TAXI ELEV EDGE LIGHT WITH NEW BC INSTAL IN EXIST PVMT(L-125-5.4)**
Lot Description **BASE BID**
Quantity **4 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 4

Description

RELOL861T(L)LEDTAXI ELEV EDGE LIGHT WITH NEW BC INSTALIN EXIST PVMT

| | |
|-------------------|---|
| Item | 12679-623-01-59 - BASE BID: RELOL852(L)LEDFLUSH RGL WITH NEW 2 PC L868 BC INSTALL IN NEW PAVEMENT (L-125-5.5) |
| Lot Description | BASE BID |
| Quantity | 6 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 6 |

Description

RELOL852(L)LEDFLUSH RGL WITH NEW 2 PC L868 BC INSTALL IN NEW PAVEMENT

| | |
|-------------------|---|
| Item | 12679-623-01-60 - BASE BID: RELOL804(L)LED ELEVATED RGL WITH NEW BASE CAN INSTALLED IN EARTH (L-125-5.6) |
| Lot Description | BASE BID |
| Quantity | 2 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 2 |

Description

RELOL804(L)LED ELEVATED RGL WITH NEW BASE CAN INSTALLED IN EARTH

| | |
|-------------------|---|
| Item | 12679-623-01-61 - BASE BID: L858(L) SIZE 1 3 TO 4 CHAR LED GUIDE SIGN ANDCONC BASE INSTALL IN EARTH(L-125-5.7) |
| Lot Description | BASE BID |
| Quantity | 2 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 2 |

Description

L858(L) SIZE 1 3 TO 4 CHAR LED GUIDE SIGN ANDCONC BASE INSTALL IN EARTH

| | |
|-----------------|--|
| Item | 12679-623-01-62 - BASE BID: L858(L)SIZE 1 5 TO 6 CHAR LED GUIDE SIGN ANDCONC BASE INSTALL IN EARTH(L-125-5.8) |
| Lot Description | BASE BID |
| Quantity | 1 ea |
| Unit Price | |

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

L858(L)SIZE 1 5 TO 6 CHAR LED GUIDE SIGN ANDCONC BASE INSTALL IN EARTH

Item **12679-623-01-63 - BASE BID: L858(L)SIZE 1 7 TO 8 CHAR LED GUIDE SIGN ANDCONC BASE INSTALL IN EARTH(L-125-5.9)**
Lot Description **BASE BID**
Quantity **1 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

L858(L)SIZE 1 7 TO 8 CHAR LED GUIDE SIGN ANDCONC BASE INSTALL IN EARTH

Item **12679-623-01-64 - BASE BID: L858(L)SIZE1 3TO4 CHAR LEDGUIDE SIGN ANDCONC BASEINSTAL IN NEWPVMT(L-125-5.10)**
Lot Description **BASE BID**
Quantity **1 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

L858(L)SIZE1 3TO4 CHAR LEDGUIDE SIGN ANDCONC BASEINSTAL IN NEWPVMT

Item **12679-623-01-65 - BASE BID: REPANL L858(L) SIZE1 2 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANLS (L-125-5.**
Lot Description **BASE BID**
Quantity **1 ea**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

REPANL L858(L) SIZE1 2 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANLS

| | |
|-------------------|---|
| Item | 12679-623-01-66 - BASE BID: REPANL L858(L) SIZE1 3 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANLS (L-125-5. |
| Lot Description | BASE BID |
| Quantity | 2 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 2 |

Description

REPANL L858(L) SIZE1 3 MOD LED GUIDE SIGN WITH ALL ACNT SIGN LEG PANLS

| | |
|-------------------|---|
| Item | 12679-623-01-67 - BASE BID: RELO L858(L) SZE 1 2 MOD LED GUIDE SIGN WTH NEW CONC BASE INST EARTH(L-125-5.13) |
| Lot Description | BASE BID |
| Quantity | 7 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 7 |

Description

RELO L858(L) SZE 1 2 MOD LED GUIDE SIGN WTH NEW CONC BASE INST EARTH

| | |
|-------------------|---|
| Item | 12679-623-01-68 - BASE BID: RELO L858(L) SZE 1 3 MOD LED GUIDE SIGN WTH NEW CONC BASE INST EARTH(L-125-5.14) |
| Lot Description | BASE BID |
| Quantity | 5 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 5 |

Description

RELO L858(L) SZE 1 3 MOD LED GUIDE SIGN WTH NEW CONC BASE INST EARTH

| | |
|-------------------|---|
| Item | 12679-623-01-69 - BASE BID: RELO L858(L) SZE 1 4 MOD LED GUIDE SIGN WTH NEW CONC BASE INST EARTH(L-125-5.15) |
| Lot Description | BASE BID |
| Quantity | 2 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> |

See ITB Specifications
Fort Lauderdale FL 33301
Qty 2

Description

RELO L858(L) SZE 1 4 MOD LED GUIDE SIGN WTH NEW CONC BASE INST EARTH

| | |
|-------------------|--|
| Item | 12679-623-01-70 - BASE BID: REMVE EXIST GUIDE SIGN AND CONC BASE IN EARTH EXIST PAVEMNT COMP (L-125-5.16) |
| Lot Description | BASE BID |
| Quantity | 16 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 16 |

Description

REMOVED EXIST GUIDE SIGN AND CONC BASE IN EARTH EXIST PAVEMNT COMP

| | |
|-------------------|---|
| Item | 12679-623-01-71 - BASE BID: REMOVAL OF EXISTING OBSTRUCTION LIGHTING SYSTEM COMPLETE (L-125-5.17) |
| Lot Description | BASE BID |
| Quantity | 1 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 1 |

Description

REMOVAL OF EXISTING OBSTRUCTION LIGHTING SYSTEM COMPLETE

| | |
|-------------------|--|
| Item | 12679-623-01-72 - BASE BID: INTER EXIST CIRC COND IN EXIST BC MH JC AND EXTND CIRC ACCORDINGLY (L-125-5.18) |
| Lot Description | BASE BID |
| Quantity | 13 ea |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 13 |

Description

INTER EXIST CIRC COND IN EXIST BC MH JC AND EXTND CIRC ACCORDINGLY

| | |
|------|--|
| Item | 12679-623-01-73 - BASE BID: IDENT OF CABLE DUCTBANK AND LIGHT FIXTURES PER FAA SPECS (L-125-5.19) |
|------|--|

Lot Description **BASE BID**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description
IDENT OF CABLE DUCTBANK AND LIGHT FIXTURES PER FAA SPECS

Item **12679-623-01-74 - BASE BID: INSTALLATION OF ALL ACNT ALCMS GRAPHIC UPDATES COMPLETE (L-125-5.20)**
Lot Description **BASE BID**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description
INSTALLATION OF ALL ACNT ALCMS GRAPHIC UPDATES COMPLETE

Item **12679-623-02-01 - ADD ALT: CONTRACTOR QUALITY CONTROL PROGRAM (CQCP) (C-100-14.1)**
Lot Description **ADD ALT**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description
CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

Item **12679-623-02-02 - ADD ALT: TEMPORARY AIR WATER POLLUTION SOIL EROSION AND SILTATION CONTROL (C-102-5.1)**
Lot Description **ADD ALT**
Quantity **1 ls**
Unit Price
Delivery Location **City of Fort Lauderdale**
[See ITB Specifications](#)
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1

Description

TEMPORARY AIR WATER POLLUTION SOIL EROSION AND SILTATION CONTROL

Item 12679-623-02-03 - ADD ALT: MOBILIZATION (C-105-6.1)**Lot Description ADD ALT****Quantity 1 ls****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1**Description**
MOBILIZATION

Item 12679-623-02-04 - ADD ALT: AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC (S-102-5.1)**Lot Description ADD ALT****Quantity 1 ls****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1**Description**
AIRPORT SAFETY AND MAINTENANCE OF TRAFFIC

Item 12679-623-02-05 - ADD ALT: PROJECT SURVEY AND STAKEOUT (S-103-5.1)**Lot Description ADD ALT****Quantity 1 ls****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 1**Description**
PROJECT SURVEY AND STAKEOUT

Item 12679-623-02-06 - ADD ALT: UNCLASSIFIED EXCAVATION (P-152-4.1)**Lot Description ADD ALT****Quantity 500 cy****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications

Fort Lauderdale FL 33301

Qty 500**Description**

UNCLASSIFIED EXCAVATION

Item 12679-623-02-07 - ADD ALT: EMBANKMENT (P-152-4.2)**Lot Description ADD ALT****Quantity 200 cy****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 200**Description**

EMBANKMENT

Item 12679-623-02-08 - ADD ALT: LIME ROCK BASE COURSE (6 IN THICK) (P-211-5.2)**Lot Description ADD ALT****Quantity 605 sy****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 605**Description**

LIME ROCK BASE COURSE (6 IN THICK)

Item 12679-623-02-09 - ADD ALT: HOT MIXED ASPHALT PAVEMENT (SURFACE) (P-401-8.1)**Lot Description ADD ALT****Quantity 135 ton****Unit Price****Delivery Location City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 135**Description**

HOT MIXED ASPHALT PAVEMENT (SURFACE)

Item 12679-623-02-10 - ADD ALT: PRIME COAT (P-602-5.1)**Lot Description ADD ALT****Quantity 185 gallon****Unit Price**

Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 185

Description
PRIME COAT

Item **12679-623-02-11 - ADD ALT: TACK COAT (P-603-5.1)**
Lot Description **ADD ALT**
Quantity **100 gallon**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 100

Description
TACK COAT

Item **12679-623-02-12 - ADD ALT: PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS YELLOW WHITE (P-620-5.1)**
Lot Description **ADD ALT**
Quantity **120 sf**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 120

Description
PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS YELLOW WHITE

Item **12679-623-02-13 - ADD ALT: TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS YELLOW WHITE (P-620-5.4)**
Lot Description **ADD ALT**
Quantity **120 sf**
Unit Price
Delivery Location **City of Fort Lauderdale**
See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301
Qty 120

Description
TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS YELLOW WHITE

| | |
|---------------------|---|
| Item | 12679-623-02-14 - ADD ALT: HYDROSEEDING (S-906-5.1) |
| Lot Description | ADD ALT |
| Quantity | 300 sy |
| Unit Price | |
| Delivery Location | City of Fort Lauderdale <u>See ITB Specifications</u> See ITB Specifications Fort Lauderdale FL 33301 Qty 300 |
| Description | |
| HYDROSEEDING | |

**CITY OF FORT LAUDERDALE
CONTRACT AND SPECIFICATIONS PACKAGE**

BID NO. 12679-623

PROJECT NO. 12708

**FORT LAUDERDALE EXECUTIVE AIRPORT
RUNWAY NO. 9 RUN-UP AREA RELOCATION,
AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS**



FDOT FIN Proj. No.:448327-1-94-01 (Construction)
FAA A.I.P No.: 3-12-0024-35-2022 (Construction)

**KHANT K. MYAT, P.E.
PROJECT MANAGER II**

**MAUREEN LEWIS, MBA, CPPB
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Errata Sheets contain modifications to the Standard Federal Aviation Administration Specifications of the same item number.

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| DBE Utilization Report | 3 |
| General Decision Number (Broward) | 7 |
| General Decision Number (Miami Dade)..... | 7 |
| General Decision Number (Palm Beach) | 7 |

The following FAA Advisory Circulars are available on-line at the FAA web-site

A/C No: 150/5200-18C "Airport Safety Self Inspection"

A/C No: 150/5210-5D "Painting, Lighting, and Marking of Vehicles Used on an Airport"

A/C No: 150/5370-2F "Operational Safety on Airports during Construction"

DRAWINGS BOUND SEPARATELY

Note: The following documents are available electronically for completion and must be returned with your bid along with your bid security, proof of insurance, and proof of required licenses/certifications.

CITB Specific References Form
 CITB Questionnaire Sheet
 Non-Collusion Statement
 Non-Discrimination Certification Form
 Construction Bid Certification Page

INVITATION TO BID

Sealed bids will be received electronically until 2:00 p.m., local time, on **THURSDAY, JUNE 9, 2022**, and opened online immediately thereafter in the 5th Floor Conference Room, City Hall, 100 North Andrews Avenue, Fort Lauderdale, Florida 33301, for **BID NO., 12679-623, PROJECT NO., 12708, FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION IMPROVEMENTS.**

All openings will be held on the BIDSYNC.COM platform. Once the Procurement Specialist opens the solicitation, the bid tabulations may be viewed immediately on a computer, laptop, cell phone, or any other device with WiFi access.

Anyone requesting assistance or having further inquiry in this matter must contact the Procurement Specialist indicated on the solicitation, via the Question and Answer (Q&A) platform on Bidsync.com before the Last Day for Questions indicated in the Solicitation.

This Project is located at Fort Lauderdale Executive Airport in the City of Fort Lauderdale. The work includes, but is not limited to, relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage. The project also includes the re-alignment of taxiways Echo and Juliet on the southern end of Runway 9. The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping and sodding, as well as installation of LED edge-lights and guidance signs.

Drawing Plans: This Project consists of Drawing File No., 4-143-40, seventy-four (74) sheets. Drawing plans may be obtained free of charge at BIDSYNC.COM.

Licensing Requirements: Possession of a General Contractor license or an Electrical Contractor license issued by the Florida Department of Business and Professional Regulation is acceptable for the prime contractor. However, the non-electrical portion of the work must be performed by a General Contractor.

NOTE: Payment on this contract will be made by Check.

Pre-Bid Meeting/Site Visit: There will not be a pre-bid meeting or site visit for this Invitation to Bid.

However, it will be the sole responsibility of the bidder to inspect the City's location(s)/facilities and become familiar with the scope of the City's requirements and systems prior to submitting a proposal. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a proposal will be considered evidence that the proposer has familiarized himself with the nature and extent of the work, equipment, materials, and labor required.

Bid Security: A certified check, cashier's check, bank officer's check or bid bond for **FIVE** percent (5%) of the bid amount, made payable to the City of Fort Lauderdale, Florida, shall accompany each offer.

INVITATION TO BID (continued)

Bid Bonds:

Bidders can submit bid bonds for projects **four** different ways.

- 1) BidSync allows bidders to submit bid bonds electronically directly through their system using **Surety 2000**. For more information on this feature and to access it, contact BIDSYNC customer care department.
- 2) Bidders may **upload** their original executed bid bond on BIDSYNC to accompany their electronic bids and deliver the original, signed and sealed hard copy within **five (5)** business days after bid opening, with the company name, bid number and title clearly indicated.
- 3) Bidders can **hand deliver** their bid bond in a sealed envelope to the Finance Department, Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, Florida 33301-1016, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope.
- 4) Bidders can **mail** their bid bond to the Finance Department, Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, Florida 33301-1016, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope. NOTE: Bond must be received in Procurement and time stamped before bid opening.

It will be the sole responsibility of the bidder to ensure that his bid is submitted prior to the bid opening date and time listed. **PAPER BID SUBMITTALS WILL NOT BE ACCEPTED. BIDS MUST BE SUBMITTED ELECTRONICALLY VIA BIDSYNC.COM**

Certified Checks, Cashier's Checks and Bank Drafts:

These **CANNOT** be submitted via BIDSYNC, nor are their images allowed to be uploaded and submitted with your electronic bid. These forms of securities, as well as hard copy bid bonds, must be received on or before the Invitation to Bid (ITB) opening date and time, at the Finance Department, Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, Florida 33301-1016, with the bid number and title clearly indicated on the envelope.

It is the bidder's sole responsibility to ensure that his bid bond or other bid security is received by the Procurement Services Division before time of bid opening. Failure to adhere to this requirement may be grounds to consider the bid as non-responsive.

The City of Fort Lauderdale reserves the right to waive any informality in any or all bids and to reject any or all bids.

For information concerning technical specifications, please utilize the Q&A platform provided by BIDSYNC at www.bidsync.com. Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures, will only be transmitted by written addendum. (See addendum section of BIDSYNC Site). **Bidders please note:** No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the bidder has familiarized himself with the nature and extent of the work, equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation.

INVITATION TO BID (continued)

Information on bid results and projects currently out to bid can be obtained on the City's website – <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services>
For general inquiries, please call (954) 828-5933.

INSTRUCTIONS TO BIDDERS

The following instructions are given for the purpose of guiding bidders in properly preparing their bids or proposals. These directions have equal force and weight with the specifications, and strict compliance is required with all of these provisions.

QUALIFICATIONS OF BIDDERS – No proposal will be accepted from, nor will any contract be awarded to, any person who is in arrears to the City of Fort Lauderdale, upon any debt or contract, or who has defaulted, as surety or otherwise, upon any obligation to the City, or who is deemed irresponsible or unreliable by the City Commission of Fort Lauderdale.

CONCERNING SUB-CONTRACTORS, SUPPLIERS, AND OTHERS - The amount of work that is sublet by the Bidder shall be limited by the condition that the Bidder shall, with his own organization, perform at least forty percent (40%) of the total dollar amount of the Work to be performed under the Agreement.

PERSONAL INVESTIGATION - Bidders shall satisfy themselves by personal investigation, and by such other means as they may think necessary or desirable, as to the conditions affecting the proposed work and the cost. No information derived from maps, plans, specifications, or from the Engineer, City Manager, or their assistants shall relieve the Contractor from any risk or from fulfilling all terms of the contract.

INCONSISTENCIES – Any seeming inconsistency between different provisions of the plans, specifications, proposal or contract, or any point requiring explanation must be inquired by the bidder, in writing, at least ten (10) days prior to the time set for opening proposals. After proposals are opened, the bidders shall abide by the decision of the Engineer as to such interpretation.

ADDENDA AND INTERPRETATIONS - No interpretations of the meaning of the plans, specifications or other contract documents will be made orally to any bidder. Prospective bidders must request such interpretation in writing as instructed in the bid package. To be considered, such request must be received by the Questions and Answers deadline as indicated in BIDSYNC.COM. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. **It is the bidder's responsibility to verify if addenda have been issued in BIDSYNC.COM.** Failure of any bidder to receive any such addenda or interpretation shall not relieve any bidder from any obligation under his bid as submitted. All addenda so issued shall become a part of the contract document. **Bidder** shall verify **in BIDSYNC.COM** that he has all addenda before submitting a bid.

LEGAL CONDITIONS - Bidders are notified to familiarize themselves with the provisions of the laws of the State of Florida relating to hours of labor on municipal work, and with the provisions of the laws of the State of Florida and the Charter and the ordinances of the City of Fort Lauderdale.

PUBLIC ENTITY CRIMES - A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for Category Two for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

INSTRUCTIONS TO BIDDERS (continued)

FORMS OF PROPOSALS - Each proposal and its accompanying statements must be made on the blanks provided. THE FORMS MUST BE SUBMITTED ELECTRONICALLY, IN GOOD ORDER WITH ALL BLANKS COMPLETED, and must show the name of the bidder and a statement as to its contents.

The proposal must be signed by one duly authorized to do so, and in case signed by a deputy or subordinate, the principal's properly written authority to such deputy or subordinate must accompany the proposal. No proposal will be accepted, for any reason whatsoever, which is not submitted to the City as stated above, within the specified time.

INSURANCE - Contractor shall provide and shall require all of its sub-contractors to provide, pay for, and maintain in force at all times during the term of the Agreement, such insurance, including Property Insurance (Builder's Risk), Commercial General Liability Insurance, Business Automobile Liability Insurance, Workers' Compensation Insurance, Employer's Liability Insurance, and Umbrella/Excess Liability, as stated below. Such policy or policies shall be issued by companies authorized to do business in the State of Florida and having agents upon whom service of process may be made in the State of Florida.

BID BOND - A certified check, cashier's check or bank officer's check made payable to the City of Fort Lauderdale, or a bid bond in favor of the City of Fort Lauderdale shall accompany each bid as evidence of the good faith and responsibility of the bidder. The amount of the check or bond shall be retained by the City as liquidated damages in the event the bidder whose bid is accepted refuses to or fails to enter into a contract for the execution of the work solicited in this Invitation to Bid.

The bid bond or check shall be a guarantee that the successful bidder will promptly execute a contract satisfactory to the City for the work solicited in this Invitation to Bid and furnish good and sufficient bonds.

Following the full execution of a contract for the work solicited in this Invitation to Bid and the successful bidder's provision of good and sufficient bonds, in the event bid security was provided by check, the amount of the bid security accompanying the successful bidder's bid will be refunded to the successful bidder, or in the event bid security was provided by a bond, the bond accompanying the successful bidder's bid will be returned to the successful bidder. In the event the successful bidder fails to enter into, execute, and deliver a contract and furnish the required bonds within ten (10) days after the City provides notice to the successful bidder to deliver the executed contract and the required bonds, the bid bond shall immediately be payable to the City of Fort Lauderdale, or in the case of a check, the City shall retain the amount of the check, as liquidated damages. The City's retention of such amount shall not be construed as a penalty or forfeiture.

FILLING IN BIDS - All prices must be electronically submitted in the proposal pages, and all proposals must fully cover all items for which proposals are asked and no other. Where more than one person is interested, it is required that all persons interested or their legal representative make all verification and subscribe to the proposal.

PRICES QUOTED: Deduct any discount offered and quote firm net unit prices. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.

INSTRUCTIONS TO BIDDERS (continued)

BIDS FIRM FOR ACCEPTANCE: Bidder warrants, by virtue of bidding, that his bid and the prices quoted in his bid will be firm for acceptance by the City for a period of one hundred and twenty (120) days from the date of bid opening unless otherwise stated in the ITB. The City shall award contract within this time period or shall request to the recommended awarded vendor an extension to hold pricing, until products/services have been awarded.

ADDITIONAL ITEMS OR SERVICES: The City may require additional items or services of a similar nature, but not specifically listed in the contract. The Contractor agrees to provide such items or services, and shall provide the City prices on such additional items or services. If the price(s) offered are not acceptable to the City, and the situation cannot be resolved to the satisfaction of the City, the City reserves the right to procure those items or services from other vendors, or to cancel the contract upon giving the Contractor thirty (30) days written notice.

DELETION OR MODIFICATION OF SERVICES: The City reserves the right to delete any portion of the Contract at any time without cause, and if such right is exercised by the City, the total fee shall be reduced in the same ratio as the estimated cost of the work deleted bears to the estimated cost of the work originally planned. If work has already been accomplished on the portion of the Contract to be deleted, the Contractor shall be paid for the deleted portion on the basis of the estimated percentage of completion of such portion.

If the Contractor and the City agree on modifications or revisions to the task elements, after the City has approved work to begin on a particular task or project, and a budget has been established for that task or project, the Contractor will submit a revised budget to the City for approval prior to proceeding with the work.

CANCELLATION FOR UNAPPROPRIATED FUNDS: The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.

CAUSES FOR REJECTION - No proposal will be canvassed, considered or accepted which, in the opinion of the City Commission, is informal or unbalanced, or contains inadequate or unreasonable prices for any items; each item must carry its own proportion of the cost as nearly as is practicable. Any alteration, erasure, interlineation, or failure to specify bids for all items called for in the schedule shall render the proposal informal.

REJECTION OF BIDS - The City reserves the right to reject any bid if the evidence submitted by the bidder, or if the investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations and to complete the work contemplated. Any or all proposals will be rejected, if there is reason to believe that collusion exists among bidders. A proposal will be considered irregular and may be rejected, if it shows serious omissions, alterations in form, additions not called for, conditions or unauthorized alternates, or irregularities of any kind. The City reserves the right to reject any or all proposals and to waive such technical errors as may be deemed best for the interests of the City.

BID PROTEST PROCEDURE: Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the City to follow the City's procurement ordinance or any applicable law may protest to the Procurement Division – Deputy Director of Finance, by delivering a letter of protest within five (5) days after a Notice of Intent to award is posted on the City's website at the following link: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/notices-of-intent-to-award>

INSTRUCTIONS TO BIDDERS (continued)

The complete protest ordinance may be found on the City's website at the following link:
[https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_A
RTVFI_DIV2PR_S2-182DIREPRAWINAW](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-182DIREPRAWINAW)

WITHDRAWALS - Any bidder may, without prejudice to himself, withdraw his proposal at any time prior to the expiration of the time during which proposals may be submitted. Such request for withdrawal must be in writing and signed in the same manner and by the same person who signed the proposal. After expiration of the period for receiving proposals, no proposal can be withdrawn, modified, or explained.

CONTRACT - The bidder to whom award is made shall execute a written contract to do the work and maintain the same in good repair until final acceptance by the proper authorities, and shall furnish good and sufficient bonds as specified within ten (10) days after receiving such contract for execution. If the bidder to whom the first award is made fails to enter into a contract as provided, the award may be annulled and the contract let to the next lowest bidder who is reliable, responsible, and responsive in the opinion of the City Commission, and that bidder shall fulfill every stipulation and obligation as if such bidder were the original party to whom award was made.

The contract shall provide that the Contractor agrees to correct any defective or faulty work or material, which may appear within one (1) year after completion of the work and receipt of final payment.

ENFORCEMENT OF SPECIFICATIONS - Copies of the specifications will be placed in the hands of all the assistants to the Engineer and Inspectors employed on the Work, who shall enforce each and every requirement of the contract. Such assistants shall have no authority to vary from such requirements.

DRAWING PLANS - Drawing plans may be obtained free of charge at BIDSYNC.COM.

SURETY BOND - The Contractor shall execute and record in the public records of Broward County, Florida, a payment and performance bond in an amount at least equal to the Contract Price with a surety insurer authorized to do business in the State of Florida as surety, ("Bond"), in accordance with Section 255.05, Florida Statutes (2021), as may be amended or revised, as security for the faithful performance and payment of all of the Contractor's obligations under the Contract Documents.

The successful bidder shall furnish a performance and payment bond in compliance with Section 255.05, Florida Statutes (2021), written by a Corporate Surety company, holding a Certificate of Authority from the Secretary of the Treasury of the United States as acceptable sureties on federal bonds, in an amount equal to the total amount payable by the terms of the contract, executed and issued by a Resident Agent licensed by and having an office in the State of Florida, representing such Corporate Surety, conditioned for the due and faithful performance of the work, and providing in addition to all other conditions, that if the Contractor, or his or its subcontractors, fail to duly pay for any labor, materials, or other supplies used or consumed by such Contractor, or his or its subcontractor or subcontractors, in performance of the work contracted to be done, the Surety will pay the same in the amount not exceeding the sum provided in such bonds, together with interest at the rate of fifteen percent (15%) per annum, and that they shall indemnify and hold harmless the City of Fort Lauderdale to the extent of any and all payments in connection with carrying out of the contract, which the City may be required to make under the law.

The Contractor is required at all times to have a valid surety bond in force covering the work being performed. A failure to have such bond in force at any time shall constitute a default on the part of the Contractor. A bond written by a surety, which becomes disqualified to do business in the State of Florida, shall automatically constitute a failure on the part of the Contractor to meet the above requirements.

INSTRUCTIONS TO BIDDERS (continued)

Such bond shall continue in effect for one (1) year after completion and acceptance of the work with liability equal to at least twenty-five percent (25%) of contract price, or an additional bond shall be conditioned that the Contractor will correct any defective or faulty work or material which appear within one (1) year after completion of the contract, upon notification by the City, except in contracts which are concerned solely with demolition work, in which cases twenty-five percent (25%) liability will not be applicable.

AUDIT OF CONTRACTOR'S RECORDS - Upon execution of the Contract, the City reserves the right to conduct any necessary audit of the Contractor's records. Such an audit, or audits, may be conducted by the City or its representatives at any time prior to final payment, or thereafter, for a period up to three (3) years. The City may also require submittal of the records from either the Contractor, the Subcontractor, or both. For the purpose of this Section, records shall include all books of account, supporting documents and papers deemed necessary by the City to assure compliance with the contract provisions.

Failure of the Contractor or Subcontractor to comply with these requirements may result in disqualification or suspension from bidding for future contracts or disapproval as a Subcontractor at the option of the City.

The Contractor shall assure that each of its Subcontractors will provide access to its records pertaining to the project upon request by the City.

PERIODIC ESTIMATE FOR PARTIAL PAYMENT - After the Contractor has submitted a periodic estimate for partial payment, approved and certified by the Public Works Department, the City shall make payment in the manner provided in the Contract Documents and in accordance with Florida's Prompt Payment Act, Section 218, Florida Statutes.

RESERVATION FOR AWARD AND REJECTION OF BIDS - The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.

LOCAL BUSINESS PREFERENCE - Section 2-186, Code of Ordinances of the City of Fort Lauderdale, provides for a local business preference. In order to be considered for a local business preference, a proposer must include the Local Business Preference Certification Statement of this ITB, as applicable to the local business preference class claimed at the time of Proposal submittal:

Upon formal request of the City, based on the application of a Local Business Preference, the Proposer shall, within ten (10) calendar days, submit the following documentation to the Local Business Preference Class claimed:

INSTRUCTIONS TO BIDDERS (continued)

- a. Copy of City of Fort Lauderdale current year business tax receipt, or Broward County current year business tax receipt, and
- b. List of the names of all employees of the proposer and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of proposal submittal shall result in the Proposer being found ineligible for the local business preference.

Definitions:

- a. The term "Class A business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- b. The term "Class B business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, or shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- c. The term "Class C business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.
- c. The term "Class D business" shall mean any business that does not qualify as a Class A, Class B, or Class C business.

The complete local business preference ordinance may be found on the City's web site at the following link:

[https://library.municode.com/fl/fort lauderdale/codes/code of ordinances?nodeId=COOR_CH2AD_A RTVFI_DIV2PR_S2-186LOBUPR](https://library.municode.com/fl/fort%20lauderdale/codes/code%20of%20ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-186LOBUPR)

DISADVANTAGED BUSINESS ENTERPRISE PREFERENCE - Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business preference. In order to be considered for a disadvantaged business preference, a proposer must include a certification from a government agency, as applicable to the disadvantaged business preference class claimed at the time of Proposal submittal:

Upon formal request of the City, based on the application of a Disadvantaged Business Preference the Proposer shall within ten (10) calendar days submit the following documentation to the Disadvantaged Business Enterprise Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or the Tri-County (Broward, Dade, West Palm Beach) current year business tax receipt, or proof of active Sunbiz status and

INSTRUCTIONS TO BIDDERS (continued)

- b. List of the names of all employees of the proposer and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or the Tri-County as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of proposal submittal shall result in the Proposer being found ineligible for the Disadvantaged Business Enterprise Preference business preference.

The complete Disadvantaged Business Preference ordinance may be found on the City's website at the following link: <https://www.fortlauderdale.gov/home/showpublisheddocument?id=56883>

DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS - The bidder or proposer certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any Federal department or agency.

LOBBYING ACTIVITIES - **ALL CONTRACTORS PLEASE NOTE:** Any contractor submitting a response to this solicitation must comply, if applicable, with City of Fort Lauderdale Ordinance No. C-11-42 & Resolution No. 07-101, Lobbying Activities. Copies of Ordinance No., C-11-42, and Resolution No. 07-101, may be obtained from the City Clerk's Office on the 7th Floor of City Hall, 100 N. Andrews Avenue, Fort Lauderdale, Florida 33301. The Ordinance may also be viewed on the City's website at <https://www.fortlauderdale.gov/home/showdocument?id=6036>.

GENERAL CONDITIONS

Unless otherwise modified in the Project's Special Conditions, the following General Conditions shall be part of the Contract:

GC - 01 - DEFINITIONS - The following words and expressions, or pronouns used in their stead, shall wherever they appear in the Contract and the Contract Documents, be construed as follows:

"Addendum" or "Addenda" - shall mean the additional Contract provisions issued in writing, by the Engineer, prior to the receipt of bids.

"Bid" - shall mean the offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

"Bidder" - shall mean any person, firm, company, corporation or entity submitting a bid for the Work.

"Bonds" -shall mean bid, performance and payment bonds and other instruments of security, furnished by Contractor and his surety in accordance with the Contract Documents.

"City" - shall mean the City of Fort Lauderdale, Florida, a Florida municipal corporation. In the event the City exercises its regulatory authority as a government body, the exercise of such regulatory authority and the enforcement of any rules, regulations, codes, laws and ordinances shall be deemed to have occurred pursuant to City's authority as a governmental body and shall not be attributable in any manner to the City as a party to this Contract.

"Consultant" - shall mean a person, firm, company, corporation or other entity employed by the City to perform the professional services for the project.

"Contractor" - shall mean the successful Bidder who has been employed by the City to perform the construction and related services for the project.

"Contract Work" - shall mean everything expressed or implied to be required to be furnished and furnished by the Contractor by any one or more of the parts of the Contract Documents referred to in the Contract hereof. In the case of any inconsistency in or between any parts of this Contract, the Project Manager shall determine which shall prevail.

"Design Documents" - shall mean the construction plans and specifications included as part of a Bid/Proposal Solicitation prepared either by the City or by the Consultant under a separate Agreement with the City.

"Engineer" - shall include the terms "professional engineer" and "licensed engineer" and means a person who is licensed to engage in the practice of engineering under Florida Statute, Chapter 471. An Engineer may be a City employee or a consultant hired by the City.

"Extra Work" - shall mean work other than that required by the Contract.

"Inspector" - shall mean an authorized representative of the City assigned to make necessary inspections of materials furnished by Contractor and of the Work performed by Contractor.

GENERAL CONDITIONS (continued)

"Notice" - shall mean written notice sent by certified United States mail, return receipt requested, or sent by commercial express carrier with acknowledgement of delivery, or via fax or email, or by hand delivery with a request for a written receipt of acknowledgment of delivery and shall be served upon the Contractor either personally or to its place of business listed in the Bid.

"Owner" - shall mean the City of Fort Lauderdale.

"Project Manager" - shall mean a professional designated by the City to manage the Project under the supervision and direction of the Public Works Director or designee.

"Public Works Director" – shall mean the Public Works Director of the City of Fort Lauderdale.

"Site" - shall mean the area upon or in which the Contractor's operations are carried out and such other areas adjacent thereto as may be designated as such by the Project Manager.

"Sub-contractor" - shall mean any person, firm, company, corporation or other entity, other than employees of the Contractor, who or which contracts with the contractor, to furnish, or actually furnishes labor and materials, or labor and equipment, or labor, materials and equipment at the site.

"Surety" - shall mean any corporation or entity that executes, as Surety, the Contractor's performance and payment bond securing the performance of this Contract.

GC - 02 - SITE INVESTIGATION AND REPRESENTATION - The Contractor acknowledges that it has satisfied itself as to the nature and location of the Work under the Contract Documents, the general and local conditions of the Site, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, and roads, field conditions, the type of equipment and facilities needed preliminary to and during the prosecution of the Work and all other matters which can in any way affect the Work or the cost thereof under the Contract Documents.

The Contractor acknowledges that it has conducted extensive tests, examinations and investigations and represents and warrants a thorough familiarization with the nature and extent of the Contract Documents, the Work, locality, soil conditions, moisture conditions and all year-round local weather and climate conditions (past and present), and, in reliance on such tests, examination and investigations conducted by Contractor and the Contractor's experts, has determined that no conditions exist that would in any manner affect the Bid Price and that the project can be completed for the Bid Price submitted.

Any failure by the Contractor to acquaint itself with all the Site conditions shall not relieve Contractor from responsibility for properly estimating the difficulty or cost thereof under the Contract Documents.

GC - 03 - SUBSTITUTIONS - If the Contractor desires to use materials and/or products of manufacturer's names different from those specified in the Contract Documents, the Bidder requesting the substitution shall make written application as described herein. The burden of proving the equality of the proposed substitution rests on the Contractor making the request. To be acceptable, the proposed substitution shall meet or exceed all expressed requirements of the Contract Documents and shall be submitted upon the Contractor's letterhead. The following requirements shall be met in order for the substitution to be considered:

1. Requests for substitution shall be accompanied by such technical data, as the party making the request desires to submit. The Project Manager will consider reports from

GENERAL CONDITIONS (continued)

reputable independent testing laboratories, verified experience records from previous users and other written information valid in the circumstances; and

2. Requests for substitution shall completely and clearly indicate in what respects the materials and/or products differ from those indicated in the Contract Documents; and
3. Requests for substitution shall be accompanied by the manufacturer's printed recommendations clearly describing the installation, use and care, as applicable, of the proposed substitutions; and
4. Requests for substitution shall be accompanied by a complete schedule of changes in the Contract Documents, if any, which must be made to permit the use of the proposed substitution.

If a proposed substitution is approved by the Project Manager, an addendum will be issued to prospective bidders not less than three (3) working days prior to the date set for opening of bids. Unless substitutions are received and approved as described above, the successful Bidder shall be responsible for furnishing materials and products in strict accordance with the Contract Documents.

GC- 04 – CONSTRUCTION RESOURCES – Contractor shall provide all labor and equipment necessary to complete the installation within a timely manner. Contractor shall provide details as to manpower and equipment to be dedicated to the project in its Work Plan. Contractor is responsible for making arrangements, obtaining and purchasing construction water services if required to complete the work.

GC - 05 - CONTROL OF THE WORK - The Project Manager shall have full control and direction of the Work in all respects. The Project Manager and/or his authorized designee(s) shall, at all times, have the right to inspect the Work and materials. The Contractor shall furnish all reasonable facilities for obtaining such information, as the Project Manager may desire respecting the quality of the Work and materials and the manner of conducting the Work. Should the Contractor be permitted to perform night Work, or to vary the period which work is ordinarily carried on in the daytime, he shall give ample notice to the Project Manager so that proper and adequate inspection may be provided. Such Work shall be done only under such regulations as are furnished in writing by the Project Manager, and no extra compensation shall be allowed to the Contractor therefore. In the event of night work, the Contractor shall furnish such light, satisfactory to the Project Manager, as will ensure proper inspection. Nothing herein contained shall relieve the Contractor from compliance with any and all City ordinances relating to noise or Work during prohibited hours.

GC - 06 - SUB-CONTRACTOR - The Contractor shall not sublet, in whole or any part of the Work without the written consent and approval of the Project Manager. Within ten (10) days after official notification of starting date, the Contractor must submit in writing, to the Project Manager, a list of all Sub-contractors. No Work shall be done by any sub-contractor until such Sub-contractor has been officially approved by the Project Manager. A sub-contractor not appearing on the original list will not be approved without written request submitted to the Project Manager and approved by the Public Works Director. In all cases, the Contractor shall give his personal attention to the Work of the Sub-contractors and the Sub-contractor is liable to be discharged by the Contractor, at the direction of the Project Manager, for neglect of duty, incompetence or misconduct.

Acceptance of any sub-contractor, other person, or organization by the Project Manager shall not constitute a waiver of any right of Project Manager to reject defective Work or Work not in conformance with the Contract Documents.

GENERAL CONDITIONS (continued)

Contractor shall be fully responsible for all acts and omissions of its Sub-contractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between City and any sub-contractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of City to pay or to see to the payment of any moneys due to any sub-contractor or other person, or organization, except as may otherwise be required by law.

GC - 07 - QUANTITIES - Contractor recognizes and agrees that the quantities shown on plans and Bid/Price Schedule are estimates only and may vary during actual construction. No change shall be made involving any departure from the general scheme of the Work and that no such change involving a material change in cost, either to the City or Contractor, shall be made, except upon written permission of the City. However, the Project Manager shall have the right to make minor alternations in the line, grade, plan, form or materials of the Work herein contemplated any time before the completion of the same. That if such alterations shall diminish the quantity of the Work to be done, such alterations shall not constitute a claim for damages or anticipated profits. That if such alterations increase the amount of the Work to be done, such increase shall be paid for according to the quantity actually performed and at the unit price or prices stipulated therefore in the Contract. The City shall, in all cases of dispute, determine the amount or quantity of the several kinds of Work which are to be paid for under this Contract, and shall decide all questions relative to the execution of the same, and such estimates and decisions shall be final and binding.

Any Work not herein specified, which might be fairly implied as included in the Contract, of which the City shall judge, shall be done by the Contractor without extra charge. However, such cost increases shall be authorized either by the Public Works Director or designee, or the City Commission based upon the purchasing threshold amounts provided for in Chapter 2 of the City of Fort Lauderdale's Code of Ordinances.

GC - 08 - NO ORAL CHANGES - Except to the extent expressly set forth in the Contract, no change in, or modification, termination or discharge of the Contract in any form whatsoever, shall be valid or enforceable unless it is in writing and signed by the parties charged, therewith or their duly authorized representative.

GC - 09 - PERMITS AND PROTECTION OF PUBLIC - Permits on file with the City and/or those permits to be obtained by the Contractor, shall be considered directive in nature, and will be considered a part of this Contract. A copy of all permits shall be given to the City and become part of the Contract Documents. Terms of permits shall be met prior to acceptance of the Work and release of the final payment.

Contractor shall secure all permits and licenses required for completing the Project. Contractor will obtain the necessary State, County, and City construction/work permits if required.

The Contractor shall comply with all applicable Codes, Standards, Specifications, etc. related to all aspects of the Project.

Where there are telephones, light or power poles, water mains, conduits, pipes or drains or other construction, either public or private, in or on the streets or alleys, the Work shall be so conducted that no interruption or delay will be caused in the operation or use of the same. Proper written notice shall be given to all affected parties prior to proceeding with the Work.

GENERAL CONDITIONS (continued)

The Contractor shall not be permitted to interfere with public travel and convenience by grading or tearing up streets indiscriminately, but the Work of constructing the various items in this contract shall proceed in an orderly, systematic and progressive manner.

GC - 10 - DISEASE REGULATIONS - The Contractor shall enforce all sanitary regulations and take all precautions against infectious diseases as the Project Manager may deem necessary. Should any infectious or contagious diseases occur among his employees, he shall arrange for the immediate removal of the employee from the Site and isolation of all persons connected with the Work.

GC - 11 - CONTRACTOR TO CHECK PLANS, SPECIFICATIONS, AND DATA - The Contractor shall verify all dimensions, quantities, and details shown on the plans, supplementary drawings, schedules, and shall notify the Project Manager of all errors, omissions, conflicts and discrepancies found therein within three (3) working days of discovery. Failure to discover or correct errors, conflictions, or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory Work, faulty construction, or improper operation resulting therefrom nor from rectifying such condition at its own expense.

GC - 12 - MATERIALS AND WORKMANSHIP - All material shall be new and the workmanship shall, in every respect, be in conformity with approved modern practice and with prevailing standards of performance and quality. In the event of a dispute, the Project Manager's decision shall be final. Wherever the Plans, Specifications, Contract Documents, or the directions of the Project Manager are unclear as to what is permissible and/or fail to note the quality of any Work, that interpretation will be made by the Project Manager, which is in accordance with approved modern practice, to meet the particular requirements of the Contract.

GC - 13 - SAFEGUARDING MARKS - The Contractor shall safeguard all points, stakes, grade marks, monuments, and benchmarks made or established on the Work, bear the cost of re-establishing same if disturbed, or bear the entire expense of rectifying Work improperly installed due to not maintaining or protecting or for removing without authorization, such established points, stakes and marks. The Contractor shall safeguard all existing and known property corners, monuments and marks not related to the Work and, if required, shall bear the cost of having them re-established by a licensed Professional surveyor registered in the State of Florida if disturbed or destroyed during the course of construction.

GC - 14 - RESTROOM FACILITIES - Contractor shall provide portable toilet facilities for employee's use at a location within the Work site to be determined by the City.

GC - 15 - PROGRESS MEETINGS - Weekly Status meetings will be conducted with representatives from the City and the Contractor. Contractor shall budget time to participate in such meetings. A well-run Project should result in short meetings.

GC - 16 - ISSUE RESOLUTION - Should Contractor become engaged in a dispute with a resident or a City employee, the Contractor shall report the situation to the Project Manager immediately. It shall be mandatory that the Contractor participate in any dispute resolution. Failure of Contractor personnel to notify the City shall obligate Contractor to replace the offending employee immediately if requested by the City.

GC - 17 - CITY SECURITY-CONTRACTOR AND SUBCONTRACTOR EMPLOYEE INFORMATION - Prior to commencing work, Contractor shall provide to the City a list of all personnel and sub-contractors on site. The list will include the name, address, birth date and driver's license number for all personnel. All personnel and subcontractors on site will have on their person a company

photo ID during all stages of the construction. Contractor shall provide standard required personal information per current City procedures.

GC - 18 - POST-CONSTRUCTION SURVEY - The Contractor shall provide as-built survey, sealed and signed by a registered surveyor in the State of Florida, as a condition of final payment.

GC - 19 - KEY PERSONNEL - Contractor shall provide as part of the Work Plan, resumes for all key project personnel providing supervision and project management functions. Resumes shall include work history and years of experience performing this type of work.

GC - 20 - EXISTING UTILITY SERVICE - All existing utility service shall be maintained with a minimum of interruption at the expense of the Contractor.

GC - 21 - JOB DESCRIPTION SIGNS – Contractor, at Contractor's expense, shall furnish, erect, and maintain suitable weatherproof signs on jobs over \$100,000 containing the following information:

1. City Seal (in colors)
2. Project or Improvement Number
3. Job Description
4. Estimated Cost
5. Completion Date

Minimum size of sign shall be four feet high, eight feet wide and shall be suitably anchored. The entire sign shall be painted and present a pleasing appearance. Exact location of signs will be determined in the field. Two (2) signs will be required, one at each end of the job. All costs of this work shall be included in other parts of the work.

GC - 22 - FLORIDA EAST COAST RIGHT-OF-WAY - Whenever a City contractor is constructing within the Florida East Coast Railway Company's Right-of-Way, it will be mandatory that the contractor carry bodily injury and property damage insurance in amounts satisfactory to the Florida East Coast Company. This insurance requirement shall be verified by the contractor with the Florida East Coast Company prior to commencing work, and maintained during the life of the Contract.

GC - 23 - ACCIDENTS - The Contractor shall provide such equipment and facilities as are necessary and/or required, in the case of accidents, for first aid services to be provided to a person who may be injured during the project duration. The Contractor shall also comply with the OSHA requirements as defined in the United States Labor Code 29 CFR 1926.50.

In addition, the Contractor must report immediately to the Project Manager every accident to persons or damage to property, and shall furnish in writing full information, including testimony of witnesses regarding any and all accidents.

GC - 24 - SAFETY PRECAUTIONS - Contractor must adhere to the applicable environmental protection guidelines for the duration of a project. If hazardous waste materials are used, detected or generated at any time, the Project Manager must be immediately notified of each and every occurrence. The Contractor shall comply with all codes, ordinances, rules, orders and other legal requirements of public authorities (including OSHA, EPA, DERM, the City, Broward County, State of Florida, and Florida Building Code), which bear on the performance of the Work.

GENERAL CONDITIONS (continued)

The Contractor shall take the responsibility to ensure that all Work is performed using adequate safeguards, including but not limited to: proper safe rigging, safety nets, fencing, scaffolding, barricades, chain link fencing, railings, barricades, steel plates, safety lights, and ladders that are necessary for the protection of its employees, as well as the public and City employees. All riggings and scaffolding shall be constructed with good sound materials, of adequate dimensions for their intended use, and substantially braced, tied or secured to ensure absolute safety for those required to use it, as well as those in the vicinity. All riggings, scaffolding, platforms, equipment guards, trenching, shoring, ladders and similar actions or equipment shall be OSHA approved, as applicable, and in accordance with all Federal, State and local regulations.

GC - 25 - DUST PREVENTION - The Contractor shall, by means of a water spray, or temporary asphalt pavement, take all necessary precautions to prevent or abate a dust nuisance arising from dry weather or Work in an incomplete stage. All costs of this Work shall be included in the cost of other parts of the Work.

Should the Contractor fail to abate a dust nuisance the Project Manager may stop the Work until the issue is resolved to the City's satisfaction.

GC - 26 - SITE CLEANUP AND RESTORATION – The Contractor shall remove all debris and unused or discarded materials from the work site daily. Contractor shall clean the work site to remove all directional drilling "Driller's Mud" materials. No "Driller's Mud" residue shall be allowed to remain in the soil or on the surface of the land or vegetation. All debris and drilling materials must be disposed of offsite at an approved location.

The Contractor shall promptly restore all areas disturbed that are outside the Project limits in equal or better condition at no additional cost to the City.

GC - 27 - COURTEOUS BEHAVIOR AND RESPECT FOR RESIDENTS AND PROPERTY – The Contractor and its employees, associates and sub-contractors shall maintain courteous behavior at all times and not engage in yelling, loud music, or other such activities. Contractor's employees shall not leave trash or other discarded items at the Work Site, especially on any private property. In the event complaints arise, Contractor shall immediately remove such offending employees from the project if requested to do so by the Project Manager. Contractor's employees shall not trespass on any private property unless necessary to complete the work but with prior permission from the owner.

Contractor shall notify and obtain permission from the residents 24 hours in advance when planning to work within the resident's property. In addition, Contractor shall notify the resident prior to entering their property to perform work or inspect/investigate the work site. Contractor shall not block residents' driveways unnecessarily. Contractor shall not park equipment on landscaped areas when the vehicle is not needed for the current construction activities. Contractor shall be responsible for repair and/or replacement of all damaged landscaping within 48 hours including repairing vehicle wheel impressions, irrigation systems, lighting systems, structures, or any other items of resident's property. Contractor shall not destroy, damage, remove, or otherwise negatively impact any landscaping within or outside the right-of-way without prior approval from the Project Manager.

GC - 28 - PLACING BARRICADES AND WARNING LIGHTS - The Contractor shall furnish and place, at Contractor's own expense, all barricades, warning lights, automatic blinker lights and such devices necessary to properly protect the work and vehicular and pedestrian traffic. Should the Contractor fail to erect or maintain such barricades, warning lights, etc., the Project Manager may, after 24 hours' notice to the Contractor, proceed to have such barricades and warning lights

GENERAL CONDITIONS (continued)

placed and maintained by City or other forces and all costs incurred thereof charged to the Contractor and may be retained by the City from any monies due, or to become due, to the Contractor.

GC - 29 - TRAFFIC CONTROL - The Contractor shall coordinate all Work and obtain, through the City's Transportation and Mobility Department, Broward County, Florida Department of Transportation, as applicable, any permits required to detour traffic or close any street before starting to work in the road

All traffic control devices, flashing lights, signs and barricades shall be maintained in working condition at all times and conform to Manual of Uniform Traffic Control Devices (MUTCD), latest edition.

GC - 30 - COORDINATION - The Contractor shall notify all utilities, transportation department, etc., in writing, with a copy to the Project Manager before construction is started and shall coordinate its Work with them. The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal, construction and rearrangement operations in order that services rendered by these parties will not be unnecessarily interrupted.

The Contractor shall arrange its Work and dispose of its materials so as to not interfere with the operation of other contractors engaged upon adjacent work, and to join its Work to that of others in a proper manner, and to perform its Work in the proper sequence in relation to that of other contractors as may be directed by the Project Manager.

Each Contractor shall be responsible for any damage done by it or its agents to the work performed by another contractor.

GC - 31 - WATER - Bulk water used for construction, flushing pipelines, and testing shall be obtained from fire hydrants. Contractor shall make payment for hydrant meter at Treasury Billing Office, 1st Floor, City Hall, 100 N. Andrews Avenue. With the paid receipt, contractor can pick up hydrant meter at the utility location office. No connection shall be made to a fire hydrant without a meter connected.

GC - 32 - PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES - Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in Section 287.135, Florida Statutes (2021), as may be amended or revised. The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2021), as may be amended or revised, and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of Section 287.135, Florida Statutes (2021), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2021), as may be amended or revised, or is engaged in a boycott of Israel or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2021), as may be amended or revised.

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GENERAL CONDITIONS (continued)

By submitting a proposal or response, the company, principals, or owners certify that it is not listed on the Scrutinized Companies with Activities in Sudan List or listed on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is engaged in business operations in Cuba or Syria.

GC - 33 - USE OF FLORIDA LUMBER TIMBER AND OTHER FOREST PRODUCTS - In accordance with Florida Statute 255.20 (3), the City specifies that lumber, timber, and other forest products used for this Project shall be produced and manufactured in the State of Florida if such products are available and their price, fitness, and quality are equal. This requirement does not apply to plywood specified for monolithic concrete forms, if the structural or service requirements for timber for a particular job cannot be supplied by native species, or if the construction is financed in whole or in part from federal funds with the requirement that there be no restrictions as to species or place of manufacture.

The Bidder affirms by submitting a bid response to this solicitation that they will comply with section 255.20 (3) Florida Statutes.

GC - 34 - PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT: The Proposer's response to the Solicitation is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this Solicitation and the Contract to be executed for this Solicitation, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the Solicitation purporting to require confidentiality of any portion of the Proposer's response to the Solicitation, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the Solicitation constitutes a Trade Secret. The City's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals purporting to be subject to copyright protection in full or in part will be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE SOLICITATION AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE SOLICITATION OR ANY PART THEREOF AS COPYRIGHTED.

GENERAL CONDITIONS (continued)

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Telephone Number: (954) 828-5002

Mailing Address: City Clerk's Office
100 N. Andrews Avenue
Fort Lauderdale, Florida 33301-1016

E-mail: prcontract@fortlauderdale.gov

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2021), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this Agreement if the Contractor does not transfer the records to the City.
4. Upon completion of the Agreement, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

SPECIAL CONDITIONS

01. PURPOSE

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified bidders, for construction services in accordance with the terms, conditions, and specifications contained in this Invitation To Bid (ITB).

02. TRANSACTION FEES

The City uses BidSync (www.bidsync.com) to distribute and receive bids and proposals. There is no charge to vendors/contractors to register and participate in the solicitation process, nor will any fees be charged to the awarded contractor.

03. SUBMISSION OF BIDS

It is the sole responsibility of the Contractor to ensure that its bid is submitted electronically through BidSync at www.bidsync.com, and that any bid security not submitted via BidSync reaches the City of Fort Lauderdale, Procurement Services Division, 6th floor, Room 619, 100 N. Andrews Avenue, Fort Lauderdale, Florida 33301-1016, in a sealed envelope marked on the outside with the ITB solicitation number and Contractor's name, no later than the time and date specified in this solicitation. **PAPER BID SUBMITALS WILL NOT BE ACCEPTED. PLEASE SUBMIT YOUR BID RESPONSE ELECTRONICALLY.**

04. INFORMATION OR CLARIFICATION

For information concerning procedures for responding to this solicitation, contact **Maureen Lewis, Senior Procurement Specialist**, at (954) 828-5239 or email at maureenl@fortlauderdale.gov. Such contact shall be for clarification purposes only.

For information concerning technical specifications please utilize the Question/Answer platform provided by BidSync at www.bidsync.com. Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. (See addendum section of BidSync site). **Bidders please note:** No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the bidder has familiarized himself with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in BidSync shall become part of any contract that is created from this ITB.

05. CONTRACT TIME

- 5.1 The Contractor recognizes that TIME IS OF THE ESSENCE. The Work shall commence within **120** calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within **446** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.

SPECIAL CONDITIONS (continued)

- 5.3 The Work shall be finally completed on the Final Completion Date and ready for final payment in accordance with this Agreement within **476** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.

06. BID SECURITY

A certified check, cashier's check, bank officer's check or bid bond for **FIVE percent (5%)** of the bid amount, made payable to the City of Fort Lauderdale, shall accompany each offer.

07. REQUIRED LICENSES/CERTIFICATIONS

Contractor must possess the following licenses/certifications to be considered for award:

General Contractor license

Note: Contractor must have proper licensing and shall submit evidence of same with its bid response.

08. SPECIFIC EXPERIENCE REQUIRED

The following expertise is required to be considered for this Contract. Specific references attesting to this expertise must be submitted with the bid response.

The contractor shall have demonstrated successful completion of a minimum of three (3) projects of similar scope and scale (or larger) and shall, for each project listed, identify location; dates of construction; project name and overall scope; scope of work that was self-performed by Contractor; and client's name, address, telephone number and e-mail address. The successful bidder shall also provide references for at least three (3) airfield construction projects that are of similar scope and budget within the last ten (10) years.

NOTE: REFERENCES SHALL NOT INCLUDE ONLY CITY OF FORT LAUDERDALE EMPLOYEES OR WORK PERFORMED FOR THE CITY. THE CITY IS ALSO INTERESTED IN WORK EXPERIENCE AND REFERENCES FROM ENTITIES OTHER THAN THE CITY OF FORT LAUDERDALE.

By signing this bid solicitation, contractor is affirming that this expertise will be provided for this Contract at no additional charge.

09. BID ALLOWANCE

Allowance for permits: Payments will be made to the contractor based on the actual cost of permits upon submission of paid permit receipts. The City shall not pay for other costs related to obtaining or securing permits.

The amount indicated is intended to be sufficient to cover the entire project. If the City's permit fees exceed the allowance indicated, the City will reimburse the contractor the actual amount of the City's permit fees required for project completion.

SPECIAL CONDITIONS (continued)

| Allowances | \$ |
|---|-----------------|
| Update existing airfield lighting control and monitoring system (ALCMS), complete | 15,000 |
| L858(L) Sign Panels for existing ADB Sign per Schedule (L-125-5.22) | 3,500 |
| TOTAL | \$18,500 |

Note: *The City will add this allowance to your bid.*

10. INSURANCE REQUIREMENTS (See Article 10, Bonds and Insurance, of the Contract for details)

Insurance

As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

The coverages, limits, and/or endorsements required herein protect the interests of the City, and these coverages, limits, and/or endorsements shall in no way be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

Commercial General Liability

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$2,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$2,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipal corporation, its officials, employees, and volunteers are to be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

SPECIAL CONDITIONS (continued)**Professional Liability**

Coverage must be afforded for Wrongful Acts in an amount not less than \$1,000,000 each claim and \$2,000,000 aggregate.

Contractor must keep the professional liability insurance in force until the third anniversary of expiration or early termination of this Agreement or the third anniversary of acceptance of work by the City, whichever is longer, which obligation shall survive expiration or early termination of this Agreement.

Business Automobile Liability

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than \$1,000,000 combined single limit each accident.

If the Contractor does not own vehicles, the Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation and Employer's Liability

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

The Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act and the Jones Act, if applicable.

Insurance Certificate Requirements

- a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
- b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term or any surviving obligation of the Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.

SPECIAL CONDITIONS (continued)

- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation and Professional Liability.
- g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

City of Fort Lauderdale
100 N. Andrews Avenue
Fort Lauderdale, FL 33301

The Contractor has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.

If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.

The Contractor's insurance coverage shall be primary insurance as respects to the City, a Florida municipal corporation, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, a Florida municipal corporation, its officials, employees, or volunteers shall be non-contributory.

Any exclusion or provision in any insurance policy maintained by the Contractor that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.

All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.

The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement to the Contractor's insurance company or companies and the City's Risk Management office, as soon as practical.

It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.

SPECIAL CONDITIONS (continued)

NOTE: CITY PROJECT NUMBER, PROJECT NAME AND BID NUMBER MUST APPEAR ON EACH CERTIFICATE, AND THE CITY OF FORT LAUDERDALE MUST BE NAMED ON THE CERTIFICATE AS AN "ADDITIONAL INSURED" ON REQUIRED LIABILITY POLICIES.

A Sample Insurance Certificate shall be included with the proposal to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of the coverage.

11. PERFORMANCE AND PAYMENT BOND: 100%

12. CITY PROJECT MANAGER

The Project Manager is hereby designated by the City as Khant Myat, P.E., whose address is 100 North Andrews, 4th Floor, Fort Lauderdale, Florida 33301-1016, telephone number: (954) 828-5061, and e-mail address is kmyat@fortlauderdale.gov. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

13. LIQUIDATED DAMAGES *(See Article 16, Liquidated Damages, of the Contract for details)*

Upon failure of the Contractor to complete the Work within the time specified for completion, the Contractor shall pay to the City the sum of **Two Hundred and Fifty Dollars (\$250.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. (See Article 16, Liquidated Damages Clause, of the Contract)

14. PAYMENT *(See Article 7, Payment, of the Contract for other details)*

Payment on this Contract will be made by check.

15. WORK SCHEDULE (including overtime hours):

Regular work hours: **8:00 am to 5:00 pm, Monday through Friday.**

City Inspector Hours: **8:00 am to 4:30 pm, Monday through Friday.**

Any inspection requested by the contractor outside those hours will be considered overtime to be paid by the Contractor.

16. INSPECTION OVERTIME COST: \$100/hr.

CITY OF FORT LAUDERDALE CONSTRUCTION AGREEMENT

THIS Agreement made and entered into this _____ day of _____, 20____, by and between the City of Fort Lauderdale, a Florida municipal corporation (City) and _____, a Florida _____ Company/Corporation (Contractor), ("Party" or collectively "Parties");

WHEREAS, the City desires to retain a contractor for the Project as expressed in its Invitation to Bid No., _____, Project Number, _____, which was opened on _____; and,

WHEREAS, the Contractor has expressed its willingness and capability to perform the necessary work to accomplish the Project.

NOW, THEREFORE, the City and the Contractor, in consideration of the mutual covenants and conditions contained herein and for other good and valuable consideration, the receipt and sufficiency is hereby acknowledged, agree as follows:

ARTICLE 1 – DEFINITIONS

Whenever used in this Agreement or in other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural forms:

- 1.1 Agreement – This written Agreement between the City and the Contractor covering the work to be performed including other Contract Documents that are attached to or incorporated in the Agreement.
- 1.2 Application for Payment – The form accepted by the City which is to be used by the Contractor in requesting progress or final payment and which is to include such supporting documentation as is required by the Contract Documents.
- 1.3 Approve – The word approve is defined to mean review of the material, equipment or methods for general compliance with design concepts and with the information given in the Contract Documents. It does not imply a responsibility on the part of the City to verify in every detail conformance with plans and specifications.
- 1.4 Bid – The offer or Bid of the Contractor submitted on the prescribed form setting forth the total prices for the Work to be performed.
- 1.5 Bid Documents – Advertisement for Invitation to Bids, the Instructions to Bidders, the Bid Form (with supplemental affidavits and sample agreements), the Contract Forms, General Conditions, the Supplementary Conditions, the Specifications, and the Plans, which documents all become an integral part of the Contract Documents.
- 1.6 Certificate of Substantial Completion - Certificate provided by the City certifying that all Work, excluding the punch list items, has been completed, inspected, and accepted by the City.

- 1.7 Change Order - A written document ordering a change in the Contract Price or Contract Time or a material change in the Work.
- 1.8 City - The City of Fort Lauderdale, Florida, including but not limited to its employees, agents, officials, representatives, contractors, subcontractors, volunteers, successors and assigns, with whom the Contractor has entered into the Agreement and for whom the Work is to be provided.
- 1.9 Contract Documents - The Contract Documents shall consist of this Agreement, Exhibits to this Agreement, Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance, Notice of Award and Notice to Proceed, General Conditions, Special Conditions, Technical Specifications, Plans/Drawings, Addenda, Bid Form and supplement Affidavits and Agreements, all applicable provisions of State and Federal Law and any modification, including Change Orders or written amendments duly delivered after execution of Agreement, Invitation to Bid, Instructions to Bidders and Bid Bond, Contractor's response to the City's Invitation to Bid, Schedule of Completion, Schedule of Values, all amendments, modifications and supplements, work directive changes issued on or after the Effective Date of the Agreement, as well as any additional documents that are required to be submitted under the Agreement.
- Permits on file with the City and/or those permits to be obtained shall be considered directive in nature and will be considered a part of this Agreement. A copy of all permits shall be given to the City for inclusion in the Contract Documents. Terms of permits shall be met prior to acceptance of the Work and release of the final payment.
- 1.10 Contract Price - The amount established in the bid submittal and award by the City's City Commission, its successors and assigns, as may be amended by Change Order.
- 1.11 Contract Time - The number of calendar days stated in the Agreement for the completion of the Work. The dates on which the work shall be started and shall be completed as stated in the Notice to Proceed.
- 1.12 Contractor - The person, firm, company, or corporation with whom the City has entered into the Agreement, including but not limited to its employees, agents, representatives, contractors, subcontractors, their subcontractors and their other successors and assigns.
- 1.13 Day - A calendar day of twenty-four (24) hours ending at midnight.
- 1.14 Defective - When modifying the word "Work" refers to work that is unsatisfactory, faulty, or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Project Manager's recommendation of final payment.
- 1.15 Effective Date of the Agreement - The effective date of the Agreement shall be the date the City Commission approves the work.
- 1.16 Final Completion Date - The date the Work is completed, including completion of the final punch list, and delivered along with those items specified in the Contract Documents and is accepted by the City.

- 1.17 Hazardous Materials (HAZMAT) - Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment defined in Section 101(14) of Comprehensive Environmental Response, Compensation and Liability Act of 1980 and in 40 CFR 300.6. Also defined by 49 CFR 171.8 as a substance or material designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.
- 1.18 Hazardous Substance - As defined by Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act; any substance designated pursuant to Section 311(b) (2) (A) of the Clean Water Act; any element, compound, mixture, solution or substance designated pursuant to Section 102 identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act {but not including any waste listed under Section 307[a] of the Clean Water Act}; any hazardous air pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
- 1.19 Hazardous Waste - Those solid wastes designated by OSHA in accordance with 40 CFR 261 due to the properties of ignitability, corrosivity, reactivity, or toxicity. Any material that is subject to the Hazardous Waste Manifest requirements of the EPA specified in 40 CFR Part 262.
- 1.20 Holidays - Those designated non-work days as established by the City Commission of the City of Fort Lauderdale.
- 1.21 Inspection - The term "inspection" and the act of inspecting as used in this Agreement is defined to mean the examination of construction to ensure that it conforms to the design concept expressed in the plans and specifications. This term shall not be construed to mean supervision, superintending and/or overseeing.
- 1.22 Notice of Award - The written notice by City to the Contractor stating that upon compliance by the Contractor with the conditions precedent enumerated therein, within the time specified that the City will sign and deliver this Agreement.
- 1.23 Notice to Proceed - A written notice to Contractor authorizing the commencement of the activities identified in the notice or as described in the Contract Documents.
- 1.24 Plans - The official graphic representations of this Project that are a part of the Contract Documents.
- 1.25 Premises (otherwise known as Site or Work Site) - means the land, buildings, facilities, etc. upon which the Work is to be performed.
- 1.26 Project - The construction project described in the Contract Documents, including the Work described therein.

- 1.27 **Project Manager** - The employee of the City, or other designated individual who is herein referred to as the Project Manager, will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the contract Documents in connection with completion of the Work in accordance with this Agreement. The Project Manager, or designee, shall be the authorized agent for the City unless otherwise specified.
- 1.28 **Punch List** - The City's list of Work yet to be done or be corrected by the Contractor, before the Final Completion date can be determined by the City.
- 1.29 **Record Documents** - A complete set of all specifications, drawings, addenda, modifications, shop drawings, submittals and samples annotated to show all changes made during the construction process.
- 1.30 **Record Drawings or "As-Built"** - A set of drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the Contractor. These documents will be signed and sealed by a Professional Engineer or a Professional Land Surveyor licensed in the State of Florida and employed by the Contractor at no cost to the City.
- 1.31 **Substantially Completed Date** - A date when the Contractor has requested in writing, stating that the Work is substantially completed and is ready for an inspection and issuance of a final punch list for the Project. If, at the time of inspection, it is determined the project is substantially completed, the City will issue a letter of Substantial Completion along with a punch list of incomplete or deficient items to be completed prior to requesting a Final Completion inspection.
- 1.32 **Work** - The construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment, and services provided or to be provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a part of the Project.

ARTICLE 2 – SCOPE OF WORK

- 2.1 The Contractor shall complete all work as specified or indicated in the Contract Documents. The Project for which the Work under the Contract Documents may be the whole or only part is generally described as follows:

FXE RUNWAY NO. 9 RUN-UP AREA RELOCATION
AND SOUTH END TAXIWAY INTERSECTION IMPROVEMENTS
ITB 12679-623 PROJECT 12708

- 2.2 All Work for the Project shall be constructed in accordance with the approved plans and Specifications. The Work generally involves:

PROJECT DESCRIPTION

This Project is located at Fort Lauderdale Executive Airport in the City of Fort Lauderdale. The work includes, but is not limited to, relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage.

The project also includes the re-alignment of taxiways Echo and Juliet on the southern end of Runway 9. The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping and sodding, as well as installation of LED edge-lights and guidance signs.

- 2.3 Within ten (10) days of the execution of this Agreement, the Contractor shall submit a Construction Schedule, Schedule of Values and a listing of all personnel employed. The general sequence of the Work shall be submitted by the Contractor and approved by the City before any work commences. The City reserves the right to issue construction directives necessary to facilitate the Work or to minimize any conflict with operations.

ARTICLE 3 – PROJECT MANAGER

- 3.1 The Project Manager is hereby designated by the City as Khant Myat, P.E., whose address is 100 N. Andrews Avenue, 4th Floor, Fort Lauderdale, FL 33301, telephone number: (954) 828-5061, and email address is kmyat@fortlauderdale.gov. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

ARTICLE 4 – CONTRACT DOCUMENTS

The Contract Documents, which comprise the entire Agreement between the City and Contractor, are incorporated herein and attached to this Agreement, and consist of the following:

- 4.1 This Agreement.
- 4.2 Exhibits to this Agreement. (Plans sheets [] to [] inclusive).
- 4.3 Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance.
- 4.4 Notice of Award and Notice to Proceed.
- 4.5 General Conditions and Special Conditions.
- 4.6 Technical Specifications.
- 4.7 Plans/Drawings.
- 4.8 Addenda number _____ through _____, inclusive.
- 4.9 Bid Form and supplement Affidavits and Agreements.
- 4.10 All applicable provisions of State and Federal Law.
- 4.11 Invitation to Bid No., _____, Instructions to Bidders, and Bid Bond.

4.12 Contractor's response to the City's Invitation to Bid No., _____, dated _____.

4.13 Schedule of Completion.

4.14 All amendments, modifications and supplements, change orders and work directive Changes, issued on or after the Effective Date of the Agreement.

4.15 Any additional documents that are required to be submitted under the Agreement.

4.16 Permits on file with the City and or those permits to be obtained shall be considered directive in nature and will be considered a part of this Agreement.

In the event of any conflict between the documents or any ambiguity or missing specification or instruction, the following priority is established:

- a. Approved change orders, addenda or amendments.
- b. Specifications and Drawings.
- c. Special Conditions.
- d. General Conditions.
- e. This Agreement dated _____, and any attachments.
- f. Invitation to Bid No., _____, and the specifications prepared by the City.
- g. Contractor's response to the City's Invitation to Bid No., _____, dated _____.
- h. Schedule of Values.
- i. Schedule of Completion.

If during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to the Project Manager, in writing, within five (5) calendar days, and before proceeding with the Work affected shall obtain a written interpretation or clarification from the City.

Any Work that may reasonably be inferred from the specifications or plans as being required to produce the intended result shall be supplied whether or not it is specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials, or equipment, such works shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or associations, or to the code of any governmental authority whether such reference be specific or implied, shall mean the latest standard specification, manual or code in effect as of the Effective Date of this Agreement, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties

and responsibilities of the City, the Contractor, or any of their agents or employees from those set forth in the Contract Documents.

ARTICLE 5 – CONTRACT TIME

- 5.1 The Contractor recognizes that **TIME IS OF THE ESSENCE**. The Work shall commence within **120** calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within **446** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.
- 5.3 The Work shall be finally completed on the Final Completion Date and ready for final payment in accordance with this Agreement within **476** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.

ARTICLE 6 – CONTRACT PRICE

- 6.1 City shall pay Contractor for performance of the Work in accordance with Article 7, subject to additions and deletions by Change Order, as provided for in this Agreement.
- 6.2 The Parties expressly agree that the Contract Price, which shall not exceed the amount of \$ _____, constitutes the total maximum compensation payable to Contractor for performing the Work, plus any Work done pursuant to a Change Order. The Contract Price is in accordance with the line items unit prices listed in the Bid. Line items are based on a unit price cost multiplied by a defined quantity. Any additional duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change to the Contract Price.
- 6.3 The Contract Price constitutes the compensation payable to Contractor for performing the Work plus any Work done pursuant to a Change Order. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in the Contract price.

ARTICLE 7 – PAYMENT

- 7.1 Contractor shall submit Applications for Payment in accordance with the Contract Documents. Applications for Payment will be processed by City as provided for in the General Conditions.
- 7.2 Progress Payments. City shall make progress payments on account of the Contract Price on the basis of Contractor's monthly Applications for Payment, which shall be submitted by the Contractor between the first (1st) and the tenth (10th) day after the end of each calendar month for which payment is requested. All progress payments will be made on the basis of the progress of the Work completed.
- 7.3 Prior to Final Completion, progress payments will be made in an amount equal to ninety-five percent (95%) of the value of Work completed less in each case the aggregate of payments previously made.

- 7.4 Final Payment. Upon final completion of the Work in accordance with the General Conditions, as may be supplemented, the City shall pay Contractor an amount sufficient to increase total payments to one hundred percent (100%) of the Contract Price. However, not less than five percent (5%) of the Contract Price shall be retained until Record Drawings (as-builts), specifications, addenda, modifications and shop drawings, including all manufacturers' instructional and parts manuals are delivered to and accepted by the City.
- 7.5 City may withhold, in whole or in part, payment to such extent as may be necessary to protect itself from loss on account of:
- 7.5.1 Defective work not remedied.
 - 7.5.2 Claims filed or reasonable evidence indicating probable filing of claims by other parties against Contractor or City because of Contractor's performance.
 - 7.5.3 Failure of Contractor to make payments properly to subcontractors or for material or labor.
 - 7.5.4 Damage to another contractor not remedied.
 - 7.5.5 Liquidated damages and costs incurred by Consultant for extended construction administration, if applicable.
 - 7.5.6 Failure of Contractor to provide any and all documents required by the Contract Documents.

When the above grounds are removed or resolved satisfactory to the Project Manager, payment shall be made in whole or in part.

- 7.6 The City shall make payment to the Contractor in accordance with the Florida Prompt Payment Act, Section 218.70, Florida Statutes (2021), as amended or revised, provided, however, complete and error free pay application is submitted.
- 7.7 The City shall make payment to the Contractor by check.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

In order to induce the City to enter into this Agreement, Contractor makes the following representations upon which the City has relied:

- 8.1 Contractor is qualified in the field of public construction and in particular to perform the Work and services set forth in this Agreement.
- 8.2 Contractor has visited the Work Site, has conducted extensive tests, examinations and investigations and represents and warrants a thorough familiarization with the nature and extent of the Contract Documents, the Work, locality, soil conditions, water table condition, moisture conditions and all year-round local weather and climate conditions (past and present), and examination and investigations conducted by Contractor and the Contractor's experts, has determined that no conditions exist that would in any manner affect the Proposed Price and that the project can be completed for the Proposed Price submitted within the Contract Time as defined in this Agreement.

Furthermore, Contractor warrants and confirms that it is totally familiar with, understands and obligates Contractor to comply with all federal, state and local laws,

ordinances, rules, regulations and all market conditions that affect or may affect the cost and price of materials and labor needed to fulfill all provisions of this Agreement or that in any manner may affect cost, progress or performance of the Work.

- 8.3 The Contractor has satisfied itself as to the nature and location of the Work under the Contract Documents, the general and local conditions of the Project, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, and roads, the conformation and conditions at the ground based on City provided reports, the type of equipment and facilities needed preliminary to and during the prosecution of the Work and all other matters which can in any way affect the Work or the cost thereof under the Contract Documents.
- 8.4 The Contractor has also studied on its own, investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Works, and finds and has further determined that no conditions exist that would in any manner affect the Proposed Price and that the Project can be completed for the Proposed Price submitted.
- 8.5 Contractor has made or caused to be made, examinations, investigations, tests and studies of such reports and related data in addition to those referred to in Paragraphs 8.2, 8.3 and 8.4 above as it deems necessary for the performance of the Work at the Contract Prices, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are, or will be, required by Contractor for such purposes.
- 8.6 Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.
- 8.7 Contractor has given City written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution by City is acceptable to the Contractor.
- 8.8 Labor
- 8.8.1 The Contractor shall provide competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The Contractor shall at all times maintain good discipline and order at the site.
- 8.8.2 The Contractor shall, at all times, have a competent superintendent, capable of reading and thoroughly understanding the drawings and specifications, as the Contractor's agent on the Work, who shall, as the Contractor's agent, supervise, direct and otherwise conduct the Work.
- 8.8.3 The Contractor shall designate the superintendent on the job to the City, in writing, immediately after receipt of the Notice to Proceed. The Contractor understands and agrees that the superintendent's physical presence on the job site is indispensable to the successful completion of the Work. If the superintendent is frequently absent from the job site, the Project Manager may

deliver written notice to the Contractor to stop work or terminate the Agreement in accordance with Article 17.

- 8.8.4 Where required and necessary, the contractor shall, at all times, have a certified "competent person" assigned to the job site. The Contractor shall assign personnel to the job site that have successfully completed training programs related to trench safety, confined space work, and maintenance of traffic (MOT). Personnel certified by the International Municipal Signal Associations with Florida Department of Transportation qualifications are required relative to MOT. Any other certifications that may be required by applicable permitting agencies for the Work shall also be complied with by the Contractor. Failure to pursue the Work with the properly certified supervisory staff may result in notice to stop work or terminate the Agreement in accordance with Article 17.

8.9 Materials:

- 8.9.1 The Contractor shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of Work.

- 8.9.2 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. Suppliers shall be selected and paid by the Contractor; the City reserves the right to approve all suppliers and materials.

- 8.10 Work Hours: Except in connection with the safety or protection of persons, or the Work, or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all work at the site shall be performed during regular working hours between 8 a.m. and 5:00 p.m., Monday through Friday.

Unless approved by the City in advance, the Contractor will not perform work on Saturday, Sunday or any legal holiday (designated by the City of Fort Lauderdale) without the Project Manager's written consent at least seventy-two (72) hours in advance of starting such work. For any overtime inspection required by City personnel, the Contractor shall pay for the additional charges to the City with respect to such overtime work. Such additional charges shall be a subsidiary obligation of the Contractor and no extra payment shall be made to the Contractor for overtime work. It shall be noted that the City's Inspector work hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday, and any work requiring inspection oversight being performed outside of this timeframe shall be paid for by the Contractor as Inspector overtime at a rate of \$100.00 per hour. The cost to the Contractor to reimburse the City for overtime inspection is established at direct-labor and overtime costs for each person or inspector required. Incidental overtime costs for engineering, testing and other related services will also be charged to the Contractor at the actual rate accrued.

8.11 Patent Fee and Royalties: The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work, or any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. The Contractor hereby expressly binds himself or itself to indemnify and hold harmless the City from all such claims and fees and from any and all suits and action of every name and description that may be brought against City on account of any such claims, fees, royalties, or costs for any such invention or patent, and from any and all suits or actions that may be brought against said City for the infringement of any and all patents or patent rights claimed by any person, firm corporation or other entity.

8.12 Permits: The Contractor shall obtain and pay for all permits and licenses. There shall be no allowance for Contractor markup, overhead or profit for permits and licenses.

The Contractor shall pay all government charges which are applicable at the time of opening of proposals. It shall be the responsibility of the Contractor to secure and pay for all necessary licenses and permits of a temporary nature necessary for the prosecution of Work.

8.13 Law and Regulations: The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the specifications or plans are in conflict, the Contractor shall give the Project Manager prompt written notice thereof within five (5) calendar days, and any necessary changes shall be adjusted by any appropriate modifications. If the Contractor performs any work knowing or having reason to know that it is contrary to such laws, ordinances, rules, standards, specifications and regulations, and without such notice to the Project Manager, the Contractor shall bear all costs arising therefrom.

8.14 Taxes: The Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the laws of the City of Fort Lauderdale, County of Broward, and the State of Florida.

8.15 Contractor Use of Premises: The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits and/or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

The Contractor shall not enter upon private property for any purpose without first securing the permission of the property owner in writing and furnishing the Project Manager with a copy of said permission. This requirement will be strictly enforced, particularly with regard to such vacant properties as may be utilized for storage or staging by the Contractor.

The Contractor shall conduct its work in such a manner as to avoid damage to adjacent private or public property. Any damage to existing structures or work of any kind, including permanent reference markers or property corner markers, or the interruption of a utility service, shall be repaired or restored promptly at no expense to the City or property owner.

The Contractor will preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site which do not reasonably interfere with the construction, as determined by the Project Manager. The Contractor will be responsible for repairing or replacing any trees, shrubs, lawns and landscaping that may be damaged due to careless operation of equipment, stockpiling of materials, tracking of grass by equipment or other construction activity. The Contractor will be liable for, or will be required to replace or restore at no expense to the City all properties and areas not protected or preserved as required herein that may be destroyed or damaged.

During the progress of the Work, the Contractor shall keep the premises free from accumulation of waste materials, rubbish and debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials and shall leave the site clean and ready for occupancy by the City. The Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents at no cost to the City.

8.16 Project Coordination: The Contractor shall provide for the complete coordination of the construction effort. This shall include, but not necessarily be limited to, coordination of the following:

8.16.1 Flow of material and equipment from suppliers.

8.16.2 The interrelated work with affected utility companies.

8.16.3 The interrelated work with the City where tie-ins to existing facilities are required.

8.16.4 The effort of independent testing agencies.

8.16.5 Notice to affected property owners as may be directed by the Project Manager.

8.16.6 Coordination with and scheduling of all required inspections from all permitting agencies.

8.17 Project Record Documents and Final As-Builts (Record Drawings): Contractor shall be responsible for maintaining up-to-date redline as-built drawings, on site, at all times during construction. All as-built information shall be surveyed and verified by a professional land surveyor registered in the State of Florida. Contractor shall provide the City with a minimum of three (3) sets of signed and sealed record drawings (Final As-Builts) and a CD of the electronic drawings files created in AutoCad 2014 or later. All costs associated with survey work required for construction layout and as-built preparation shall be the responsibility of the Contractor.

8.18 Safety and Protection:

8.18.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

8.18.1.1 All employees working on the project and other persons who may be affected thereby.

- 8.18.1.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
- 8.18.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

8.18.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and utilities when execution of the Work may affect them at least seventy-two (72) hours in advance (unless otherwise required). All damage, injury or loss to any property caused, directly or indirectly, in whole or in part by the Contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. The Contractor's duties and responsibilities for safety and protection of the Work shall continue until such time as all the Work is completed and accepted by the City.

8.19 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the City, is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Project Manager prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.

8.20 Risk of Loss: The risk of loss, injury or destruction shall be on the Contractor until acceptance of the Work by the City. Title to the Work shall pass to the City upon acceptance of the Work by the City.

8.21 Environmental: The Contractor has fully inspected the Premises and agrees, except as to the presence of any asbestos, to accept the Premises in an "as is" physical condition, without representation or warranty by the City of any kind, including, without limitation, any and all existing environmental claims or obligations that may arise from the presence of any "contamination" on, in or about the Premises. Further, Contractor and all entities claiming by, through or under the Contractor, releases and discharges the City from any claim, demand, or cause of action arising out of or relating to the Contractor's use, handling, storage, release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of any hazardous substances including asbestos on, under, from or about the Premises. The Contractor shall have no liability for any pre-existing claims or "contamination" on the Premises.

The Contractor shall not use, handle, store, discharge, treat, remove, transport, or dispose of Hazardous Substances including asbestos at, in, upon, under, to or from the Premises until receipt of instructions from the City. At such time, a City approved Change Order, which shall not include any profit, shall authorize the Contractor to perform such services.

The Contractor shall immediately deliver to the Project Manager complete copies of all notices, demands, or other communications received by the Contractor from any governmental or quasi-governmental authority or any insurance company or board of fire underwriters or like or similar entities regarding in any way alleged violations or potential violations of any Environmental Law or otherwise asserting the existence or potential existence of any condition or activity on the Premises which is or could be dangerous to life, limb, property, or the environment.

For other and additional consideration, the Contractor hereby agrees, at its sole cost and expense, to indemnify and protect, defend, and hold harmless the City and its respective employees, agents, officials, officers, representatives, contractors and subcontractors, successors, and assigns (hereafter the "City") from and against any and all claims, demands, losses, damages, costs, expenses, including but not limited to mitigation, restoration, and natural restoration expenses, liabilities, assessments, fines, penalties charges, administrative and judicial proceedings and orders, judgments, causes of action, in law or in equity, remedial action requirements and/or enforcement actions of any kind (including, without limitation, attorneys' fees and costs) directly or indirectly arising out of or attributable to, in whole or in part, the Contractor's use, handling, storage, release, threatened release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of a Hazardous Substance (excluding asbestos) on, under, from, to or about the Premises or any other activity carried on or undertaken on or off the Premises by the Contractor or its employees, agents or subcontractors, in connection with the use, handling, storage, release, threatened release, discharge, treatment, mitigation, natural resource restoration, removal, transport, decontamination, cleanup, disposal and/or presence or any Hazardous Substance including asbestos located, transported, or present on, undue, from, to, or about the Premises. This indemnity is intended to be operable under 42 U.S.C. Section 9607 as amended or revised, and any successor section.

The scope of the indemnity obligations includes, but is not limited to: (a) all consequential damages; (b) the cost of any required or necessary repair, cleanup, or detoxification of the applicable real estate and the preparation and implementation of any closure, remedial or other required plan, including without limitation; (i) the costs of removal or remedial action incurred by the United States government or the State of Florida or response costs incurred by any other person, or damages from injury to destruction of, or loss of, natural resources, including the cost of assessing such injury, destruction, or loss, incurred pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended; (ii) the clean-up costs, fines, damages, or penalties incurred pursuant to any applicable provisions of Florida law; and (iii) the cost and expenses of abatement, correction or cleanup, fines, damages, response costs, or penalties which arise from the provisions of any other statute, law, regulation, code ordinance, or legal requirement state or federal; and (c) liability for personal injury or property damage arising under any statutory or common law tort theory, including damages assessed for the maintenance of a public private nuisance, response costs, or for the carrying on of an abnormally dangerous activity.

8.22 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any other reason or allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels on basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

8.23 No Liens: If any subcontractor, supplier, laborer, or materialmen or Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the Work is performed or any part or against any personal property or improvements or claim against any monies due or to become due from the City to Contractor or from Contractor to a subcontractor, for or on account of any work, labor, services, material, equipment, or other items furnished in connection with the Work or any Change Order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within twenty (20) days of the filing or from receipt of written notice from the City.

Additionally, until such time as such lien or claim is satisfied, removed or discharged by Contractor, all monies due to Contractor, or that become due to Contractor before the lien or claim is satisfied, removed or otherwise discharged, shall be held by City as security for the satisfaction, removal and discharge of such lien and any expense that may be incurred while obtaining such. If Contractor shall fail to do so, City shall have the right, in addition to all other rights and remedies provided by this Agreement or by law, to satisfy, remove, or discharge such lien or claim by whatever means City chooses at the entire and sole cost and expense of Contractor which costs and expenses shall, without limitation, include attorney's fees, litigation costs, fees and expenses and all court costs and assessments.

8.24 Weather Emergencies: Upon issuance of a hurricane watch by the National Weather Service, the Contractor shall submit to the City a plan to secure the work area in the event a hurricane warning is issued. The plan shall detail how the Contractor will secure the Premises, equipment and materials in a manner as to prevent damage to the Work and prevent materials and equipment from becoming a hazard to persons and property on and around the Premises. The plan shall include a time schedule required to accomplish the hurricane preparations and a list of emergency contacts that will be available, and in the City before, during and immediately after the storm.

Upon issuance of a hurricane warning by the National Weather Service, if the Contractor has not already done so, the Contractor shall implement its hurricane preparedness plan. Cost of development and implementation of the hurricane preparedness plan shall be considered as incidental to construction. Cost of any clean

up and rework required after the storm will be considered normal construction risk within Florida and shall not entitle the Contractor to any additional compensation. Contractor shall be entitled to request an extension in time for completion of the Work, in accordance with the provisions of Article 15 of this Agreement, equal to the time it is shut down for implementation of the preparedness plan, the duration of the storm and a reasonable period to restore the Premises.

- 8.25 Force Majeure: No Party shall hold the other responsible for damages or for delays in performance caused by force majeure, acts of God, or other acts or circumstances beyond the control of the other party or that could not have been reasonably foreseen and prevented. For this purpose, such acts or circumstances shall include, but not be limited to weather conditions affecting performance, floods, epidemics, pandemics, war, act of Governmental Authority, state of emergency, riots, strikes, lockouts, or other industrial disturbances, or protest demonstrations. Should such acts or circumstances occur, the parties shall use their best efforts to overcome the difficulties arising therefrom and to resume the Work as soon as reasonably possible with the normal pursuit of the Work.

Inclement weather, continuous rain for less than three (3) days or the acts or omissions of subcontractors, third-party contractors, materialmen, suppliers, or their subcontractors, shall not be considered acts of force majeure.

No Party shall be liable for its failure to carry out its obligations under the Agreement during a period when such Party is rendered unable by force majeure to carry out its obligation, but the obligation of the Party or Parties relying on such force majeure shall be suspended only during the continuance of the inability and for no longer period than the unexpected or uncontrollable event.

The Contractor further agrees and stipulates, that its right to excuse its failure to perform by reason of force majeure shall be conditioned upon giving written notice of its assertion that a Force Majeure delay has commenced within ninety-six (96) hours after such an occurrence. The Contractor shall use its reasonable efforts to minimize such delays. The Contractor shall promptly provide an estimate of the anticipated additional time required to complete the Project.

- 8.26 Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assisted Contracts: The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26 and as approved by DOT, is incorporated by reference in this Agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this Agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

Additionally, the Contractor assures that it, the sub-recipient or its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate. This additional language must be included in each subcontract the prime Contractor signs with a subcontractor.

ARTICLE 9 – CITY’S RESPONSIBILITIES

- 9.1 The City shall furnish the data required of the City under the Contract Documents promptly and shall make payments to the Contractor promptly after they are due as provided in Article 7.
- 9.2 The City shall provide public rights-of-way and easement, where available, for the installation of conduits, transformers pads and related appurtenances only.
- 9.3 Technical Clarifications and Interpretations:
- 9.3.1 The City shall issue, with reasonable promptness, such written clarifications or interpretations of the Contract Documents as it may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. Should the Contractor fail to request interpretation of questionable items in the Contract Documents, the City shall not entertain any excuse for failure to execute the Work in a satisfactory manner.
- 9.3.2 The City shall interpret and decide matters concerning performance under the requirements of the Contract Documents, and shall make decisions on all claims, disputes or other matters in question. Written notice of each claim, dispute or other matter will be delivered by claimant to the other Party but in no event later than five (5) days after the occurrence of event, and written supporting data will be submitted to the other Party within five (5) days after such occurrence. All written decisions of the City on any claim or dispute will be final and binding.
- 9.4 The Contractor shall perform all Work to the reasonable satisfaction of the City in accordance with the Contract Documents. In cases of disagreement or ambiguity, the City shall decide all questions, difficulties, and disputes of whatever nature, which may arise under or by reason of this Agreement or the quality, amount and value of the Work, and the City's decisions on all claims, questions and determination are final.
- 9.5 Cancellation for Unappropriated Funds: The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.

ARTICLE 10 – BONDS AND INSURANCE

10.1 Public Construction and Other Bonds: The Contractor shall furnish Public Construction or Performance and Payment Bonds ("Bond"), each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. These Bonds shall remain in effect until at least one (1) year after the date of final payment, except as otherwise provided by law. All Bonds shall be furnished and provided by the surety and shall be in substantially the same form as prescribed by the Contract Documents and be executed by such sureties as (i) are licensed to conduct business in the State of Florida, and (ii) are named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department and (iii) otherwise meet the requirements set forth herein that apply to sureties. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

10.1.1 Performance Bond: The Contractor shall execute and record in the public records of Broward County, Florida, a payment and performance bond in an amount at least equal to the Contract Price with a surety insurer authorized to do business in the State of Florida as surety, ("Bond"), in accordance with Section 255.05, Florida Statutes (2021), as may be amended or revised, as security for the faithful performance and payment of all of the Contractor's obligations under the Contract Documents.

A Corporate Surety Bond legally issued, meeting the approval of, and running to the City in an amount not less than the Contract Price of such improvements, conditioned that the Contractor shall maintain and make all repairs to the improvements constructed by the Contractor at their own expense and free of charge to the City, for the period of one (1) year after the date of acceptance of the Work within such period by reason of any imperfection of the material used or by reason of any defective workmanship, or any improper, imperfect or defective preparation of the base upon which any such improvement shall be laid.

10.2 Disqualification of Surety: If the Surety on any Bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Florida or it ceases to meet the requirements of clauses (i) and (ii) of Paragraph 10.1, the Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which shall be acceptable to the City.

10.3 Insurance

As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of

coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

The coverages, limits, and/or endorsements required herein protect the interests of the City, and these coverages, limits, and/or endorsements shall in no way be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

Commercial General Liability

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$2,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$2,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipal corporation, its officials, employees, and volunteers are to be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

Professional Liability

Coverage must be afforded for Wrongful Acts in an amount not less than \$1,000,000 each claim and \$2,000,000 aggregate.

Contractor must keep the professional liability insurance in force until the third anniversary of expiration or early termination of this Agreement or the third anniversary of acceptance of work by the City, whichever is longer, which obligation shall survive expiration or early termination of this Agreement.

Business Automobile Liability

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than \$1,000,000 combined single limit each accident.

If the Contractor does not own vehicles, the Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Workers' Compensation and Employer's Liability

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

The Contractor must be in compliance with all applicable state and federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act and the Jones Act, if applicable.

Insurance Certificate Requirements

- i. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
- j. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- k. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- l. In the event the Agreement term or any surviving obligation of the Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
- m. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- n. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation and Professional Liability.
- o. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- p. The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

City of Fort Lauderdale
100 N. Andrews Avenue
Fort Lauderdale, FL 33301

The Contractor has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.

If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.

The Contractor's insurance coverage shall be primary insurance as respects to the City, a Florida municipal corporation, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, a Florida municipal corporation, its officials, employees, or volunteers shall be non-contributory.

Any exclusion or provision in any insurance policy maintained by the Contractor that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.

All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.

The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement to the Contractor's insurance company or companies and the City's Risk Management office, as soon as practical.

It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.

NOTE: CITY PROJECT NUMBER, PROJECT NAME AND BID NUMBER MUST APPEAR ON EACH CERTIFICATE, AND THE CITY OF FORT LAUDERDALE MUST BE NAMED ON THE CERTIFICATE AS AN "ADDITIONAL INSURED" ON REQUIRED LIABILITY POLICIES.

A Sample Insurance Certificate shall be included with the proposal to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of the coverage.

**ARTICLE 11- WARRANTY AND GUARANTEE, TESTS AND INSPECTIONS,
CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

11.1 Warranty: The Contractor warrants and guarantees to the City that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

11.1.1 Warranty of Title: The Contractor warrants to the City that it possesses good, clear and marketable title to all equipment and materials provided and that there are no pending liens, claims or encumbrances against the equipment and materials.

11.1.2 Warranty of Specifications: The Contractor warrants that all equipment, materials and workmanship furnished, whether furnished by the Contractor, its subcontractors or suppliers, will comply with the specifications, drawings and other descriptions supplied or adopted and that all services will be performed in a workmanlike manner.

11.1.3 Warranty of Merchantability: The Contractor warrants that any and all equipment to be supplied pursuant to this Agreement is merchantable, free from defects, whether patent or latent in material or workmanship, and fit for the ordinary purposes for which it is intended.

11.2 Tests and Inspections: Contractor shall retain the services of an independent, certified, testing lab to perform all testing as required by the specifications, contract drawings, and any applicable permitting agency. Contractor shall provide evidence of certification to the City before the work and testing is done. Testing results shall be submitted to the Project Manager for review and approval at the time the results are provided to the Contractor. The Contractor shall give the Project Manager and City Inspector a minimum of twenty-four (24) hours' advanced notice of readiness of the Work for all required inspections, tests, or approvals and shall notify all applicable permitting agencies in a timely manner based on requirements set forth in the permit documents.

11.2.1 Neither observations by the Project Manager nor inspections, tests or approvals by others shall relieve the Contractor from its obligations to perform the Work in accordance with the Contract Documents.

11.3 Uncovering Work: If any work that is to be inspected, tested or approved is covered without approval or consent of the Project Manager, it must, if requested by the Project Manager, be uncovered for observation and/or testing. Such uncovering and replacement shall be at the Contractor's sole expense unless the Contractor has given

the Project Manager timely notice of the Contractor's intention to cover such Work and the Project Manager has not acted with reasonable promptness in response to such notice.

- 11.3.1 If the Project Manager considers it necessary or advisable that Work covered in accordance with Paragraphs 11.2.1 be observed by the City or inspected or tested by others, the Contractor at the City's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection testing and reconstruction if it makes a claim therefore as provided in Articles 14 and 15.
- 11.4 City May Stop the Work: If the Work is defective, or the Contractor fails to supply sufficient skilled supervisory personnel or workmen or suitable materials or equipment or the work area is deemed unsafe, the City may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other Party. The City will not award any increase in Contract Price or Contract Time if the Work is stopped due to the circumstances described herein.
- 11.5 Correction or Removal of Defective Work Before Final Payment: If required by the Project Manager, the Contractor shall promptly, without cost to the City and as specified by the Project Manager, either correct any defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by the City remove it from the site and replace it with non-defective Work.
- 11.6 One Year Correction Period After Final Payment: If within one (1) year after the date of final acceptance, or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, the Contractor shall promptly, without cost to the City and in accordance with the City's written instructions, either correct such defective Work, or, if it has been rejected by the City, remove it from the site and replace it with non-defective Work.

If the Contractor does not promptly comply with the terms of such instructions or in an emergency where delay would cause serious risk of loss or damage, the City may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs for such removal and replacement, including compensation for additional professional services, shall be paid by the Contractor.

- 11.7 Acceptance of Defective Work, Deductions: If, instead of requiring correction or removal and replacement of defective Work, the City, at the City's sole option, prefers to accept it, the City may do so. In such a case, if acceptance occurs prior to the Project Manager's recommendation of final payments, a Change Order shall be issued incorporating the necessary revisions in the Contract's Documents, including appropriate reduction in the Contract Price; or if the acceptance occurs after such recommendation, an appropriate amount shall be paid by the Contractor to the City.
- 11.8 City May Correct Defective Work: If the Contractor fails within a reasonable time after written notice of the Project Manager to proceed to correct defective Work or to remove and replace rejected Work as required by the Project Manager in accordance with Paragraph 11.5, or if the Contractor fails to perform the Work in accordance with the Contract Documents, the City may, after seven (7) days' written notice to the Contractor, correct and remedy any such deficiency. In exercising its rights under this paragraph, the City shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, suspend the Contractor's services related thereto and take possession of the Contractor's tools, construction equipment and materials stored at the site or elsewhere. The Contractor shall allow the City's representative agents and employees such access to the site as may be necessary to enable the City to exercise its rights under this paragraph. All direct and indirect costs of the City in exercising such rights shall be charged against the Contractor in an amount verified by the Project Manager, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitation, compensation for additional professional services required and costs of repair and replacement of work or others destroyed or damaged by correction, removal or replacement of the Contractor's defective Work. The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the City of the City's right hereunder.

ARTICLE 12 – INDEMNIFICATION

- 12.1 Disclaimer of Liability: The City shall not at any time, be liable for injury or damage occurring to any person or property from any cause, whatsoever, arising out of Contractor's construction and fulfillment of this Agreement.
- 12.2 Indemnification: For other, additional good valuable consideration, the receipt and sufficiency of which is hereby acknowledged:
- 12.2.1 Contractor shall, at its sole cost and expense, indemnify and hold harmless the City, its representatives, employees and elected and appointed officials from or on account of all claims, damages, losses, liabilities and expenses, direct, indirect or consequential including but not limited to fees and charges of engineers, architects, attorneys, consultants and other professionals and court costs arising out of or in consequence of the performance of this Agreement at all trial and appellate levels. Indemnification shall specifically include but not be

limited to claims, damages, losses, liabilities and expenses arising out of or from (a) the negligent or defective design of the project and Work of this Agreement; (b) any act, omission or default of the Contractor, its subcontractors, agents, suppliers, employees or laborers; (c) any and all bodily injuries, sickness, disease or death; (d) injury to or destruction of tangible property, including any resulting loss of use; (e) other such damages, liabilities, or losses received or sustained by any person or persons during or on account of any operations connected with the construction of this Project including the warranty period; (f) the use of any improper materials; (g) any construction defect including both patent and latent defects; (h) failure to timely complete the work; (i) the violation of any federal, state, county or City laws, ordinances or regulations by Contractor, its subcontractors, agents, servants, independent contractors or employees; (j) the breach or alleged breach by Contractor of any term of the Agreement, including the breach or alleged breach of any warranty or guarantee.

12.2.2 Contractor agrees to indemnify, defend, and hold harmless the City, its officers, agents and employees, from all damages, liabilities, losses, claims, fines and fees, and from any and all suits and actions of every name and description that may be brought against City, its officers, agents and employees, on account of any claims, fees, royalties, or costs for any invention or patent and/or for the infringement of any and all copyrights or patent rights claimed by any person, firm, or corporation.

12.2.3 Contractor shall pay all claims, losses, liens, settlements or judgments of any nature in connection with the foregoing indemnifications including, but not limited to, reasonable attorney's fees and costs for trials and appeals.

12.2.4 If any subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the work is performed or any part or against any personal property or improvements thereon or make a claim against any monies due or to become due from the City to Contractor or from Contractor to a subcontractor, for or on account of any work, labor, services, material, equipment, or other items furnished in connection with the Work or any change order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within five (5) days of the filing or from receipt of written notice from the City.

Additionally, until such time as such lien or claim is satisfied, removed or discharged by Contractor, all monies due to Contractor, or that become due to Contractor before the lien or claim is satisfied, removed or otherwise discharged, shall be held by City as security for the satisfaction, removal and discharge of such lien and any expense that may be incurred while obtaining the discharge. If Contractor shall fail to do so, City shall have the right, in addition to all other rights and remedies provided by this Agreement or by law, to satisfy, remove, or discharge such lien or claim by whatever means City chooses at the entire and sole cost and expense of Contractor which costs and

expenses shall, without limitation, include attorney's fees, litigation costs, fees and expenses and all court costs and assessments, and which shall be deducted from any amount owing to Contractor. In the event the amount due Contractor is less than the amount required to satisfy Contractor's obligation under this, or any other article, paragraph or section of this Agreement, the Contractor shall be liable for the deficiency due the City.

12.2.5 The Contractor and the City agree that Section 725.06(2), Florida Statutes (2021), as may be amended or revised, controls the extent and limits of the indemnification and hold harmless provisions of this Agreement, if any, and that the Parties waive any defects in the wording of this Article that runs afoul of said statutory section.

ARTICLE 13 – CHANGES IN THE WORK

- 13.1 Without invalidating this Agreement, the City may, at any time or from time-to-time order additions, deletions or revisions in the Work through the issuance of Change Orders. Upon receipt of a Change Order, the Contractor shall proceed with the Work involved. All Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 14 or Article 15 on the basis of a claim made by either Party.
- 13.2 The Project Manager may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall intent of the Contract Documents. Such changes must be in writing and signed by the City and the Contractor.
- 13.3 If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be the Contractor's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. The Contractor shall furnish proof of such adjustment to the City.

ARTICLE 14 – CHANGE OF CONTRACT PRICE

Change of Contract Price, approved by City, shall be computed as follows:

- 14.1 Cost of the Work: The term "Cost of the Work" means the sum of all direct costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by the City, these costs shall be in amounts no higher than those prevailing in the City and shall include only the following items and shall not include any of the costs itemized in Paragraph 14.3:

- 14.1.1 Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications agreed upon by the City and the Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work.

Payroll costs shall include, but not be limited to, salaries and wages plus cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker's compensation, health and retirement benefits, bonuses, sick leave, vacation and applicable holiday pay.

14.1.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage, and required suppliers and field services. All cash discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the City, and the Contractor shall make provisions so that they may be obtained.

14.1.3 Supplemental costs including the following:

14.1.3.1 Cost, including transportation and maintenance of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work.

14.1.3.2 Rentals of all construction equipment and machinery and the parts whether rented from the Contractor or others in accordance with rental agreements approved by the City, and the costs of transporting, loading, unloading, installation, dismantling and removal. The rental of any such equipment, machinery or parts shall cease when the use is no longer necessary for the Work.

14.1.3.3 Sales, consumer use or similar taxes related to the Work and for which the Contractor is liable, imposed by laws and regulations.

14.1.3.4 Royalty payments and fees for permits and licenses.

14.1.3.5 The cost of utilities, fuel and sanitary facilities at the Work site.

14.1.3.6 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

14.1.3.7 Cost of premiums for additional bonds and insurance required because of changes in the Work.

14.2 The Contract Price may only be increased by a Change Order when Work is modified in accordance with Article 13 and approved by the City in writing. Any claim for an increase in the Contract Price resulting from a Change Order shall be based on written notice delivered to the Project Manager within ten (10) days of the occurrence of the Change Order giving rise to the claim. Notice of the amount of the claim with supporting data shall be included in the Change Order and delivered within twenty (20) days of such occurrence unless Project Manager allows an additional period of time to ascertain accurate cost data. Any change in the Contract Price resulting from any such claim shall be incorporated in the Change Order. **IT IS EXPRESSLY AND SPECIFICALLY AGREED THAT ANY AND ALL CLAIMS FOR CHANGES TO THE CONTRACT PRICE SHALL BE WAIVED IF NOT SUBMITTED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.**

14.3 Not Included in the Cost of the Work: The term "Cost of the Work" shall not include any of the following:

14.3.1 Payroll costs and other compensation of the Contractor's officers' executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditor, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by the Contractor whether at the site or in the Contractor's principal or branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 14.1.1, all of which are to be considered administrative costs covered by the Contractor's fee.

14.3.2 Expenses of the Contractor's principal and branch offices other than the Contractor's office at the site.

14.3.3 Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work and charges against the Contractor for delinquent payments.

14.3.4 Cost of premiums for all bonds and for all insurance whether or not the Contractor is required by the Contract Documents to purchase and maintain the same.

14.3.5 Costs due to the negligence of the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

14.3.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 14.1.

14.4 Basis of Compensation: The Contractor's compensation, allowed to the Contractor for overhead and profit, shall be determined as follows:

14.4.1 A mutually acceptable negotiated fee:

14.4.1.1 For costs incurred under Paragraphs 14.1.1 and 14.1.2, the Contractor's fee shall not exceed five percent (5%).

14.4.1.2 No fee shall be payable on the basis of costs itemized under Paragraphs 14.1.3.1, 14.1.3.2, 14.1.3.3, 14.1.3.4, 14.1.3.5, 14.1.3.6, 14.1.3.7, 14.3.1, 14.3.2, 14.3.3, 14.3.4, 14.3.5 and 14.3.6.

14.4.1.3 The amount of credit to be allowed by the Contractor to the City for any such change which results in a net decrease plus a deduction in the Contractor's fee by an amount equal to five percent (5%) for the net decrease.

14.4.1.4 When both additions and credits are involved in any one change the combined overhead and profit shall be figured on the basis of net increase if any, however, not to exceed five percent (5%) of the agreed compensation. Profit will not be paid on any Work not performed.

14.5 Cost Breakdown Required: Whenever the cost of any Work is to be determined pursuant to this Article, the Contractor will submit in form acceptable to the City an itemized cost breakdown together with supporting documentation. Whenever a change in the Work is to be based upon mutual acceptance of a lump sum, whether the amount is an addition, credit, or no-charge-in-cost, the Contractor shall submit an estimate substantiated by a complete itemized breakdown:

14.5.1 The breakdown shall list quantities and unit prices for materials, labor, equipment and other items of cost.

14.5.2 Whenever a change involves the Contractor and one (1) or more subcontractors and the change is an increase in the agreed compensation, the overhead and profit percentage for the Contractor and each subcontractor shall be itemized separately.

14.6 Time for the City to Approve Extra Work: Any Extra Work in an amount up to and not exceeding a cumulative amount of \$25,000 for a specific project can be approved by the City Manager and shall require a written Change Order proposal to be submitted to the Public Works Director for submittal and approval by the City Manager. Extra Work exceeding the cumulative amount of \$25,000 for a specific project must be approved by the City Commission and a written Change Order proposal must be submitted to the Public Works Director for submittal and approval by the City Manager and City Commission. No financial or time claim for delay to the project resulting from the Change Order approval process outlined above under Section 14.6 will be allowed.

ARTICLE 15 - CHANGE OF THE CONTRACT TIME

15.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Project Manager within five (5) days of the occurrence of the event giving rise to the claim. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

15.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made therefore as provided in Paragraph 15.1. Such delays shall include but not be limited to, acts or neglect by the City, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, pandemics, act of Governmental Authority, state of emergency, or acts of God.

15.3 All time limits stated in the Contract Documents are of the essence. The provisions of this Article 15 shall not exclude recovery for damages for delay by the Contractor.

15.4 Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor (non-affiliated Contractors) shall not give rise to a claim by the Contractor for damages for increases in material and/or labor costs. Such

entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T and Florida East Coast Railway, LLC.

- 15.5 Rights of Various Interests: Whenever work being done by City's forces or by other contractors is contiguous to or within the limits of work covered by this Agreement, the respective rights of the various interests involved shall be established by the Project Manager to secure the completion of the various portions of the Work in general harmony.

ARTICLE 16 – LIQUIDATED DAMAGES

- 16.1 Upon failure of the Contractor to complete the Work within the time specified for completion, the Contractor shall pay to the City the sum of **Two Hundred and Fifty Dollars (\$250.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. Should an act of God or the acts or omissions of the City, its agents or representatives, in derogation to the terms of this Agreement cause the delay, the Contractor shall not be responsible for the delay nor liquidated damages. Liquidated damages are fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by the City as a consequence of such delay and both Parties desiring to obviate any question of dispute concerning the amount of damages and the cost and effect of the failure of the Contractor to complete the Work on time. Liquidated damages shall apply separately to each portion of the Work for which a time of completion is given. The City shall have the right to deduct from or retain any compensation which may be due or which may become due and payable to the Contractor the amount of liquidated damages, and if the amount retained by the City is insufficient to pay in full such liquidated damages, the Contractor shall pay all liquidated damages in full. The Contractor shall be responsible for reimbursing the City, in addition to liquidated damages or other damages for delay, for all costs of engineering, architectural fees, and inspection and other costs incurred in administering the construction of the Project beyond the completion date specified or beyond an approved extension of time granted to the Contractor whichever is later. Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor shall not give rise to a claim by Contractor for damages for increase in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T, and Florida East Coast Railway, LLC.

In addition, for work beyond the time (hour and minute) established for opening the taxiway/runway, following each closure of that taxiway/runway in accordance with the phasing plans, the City will charge the Contractor a rental fee for the Contractor's use of the taxiway/runway. The parties agree that the sum of **Five Hundred Dollars (\$500)** for the first minute and **Fifty Dollars (\$50)** for every minute thereafter shall be fixed as the rental rates for continuing a taxiway/runway closure beyond the time provided for opening the taxiway/runway during each phase of work that requires taxiway/runway closure.

The Contractor shall pay to the City, or have withheld from monies due the Contractor, the rental sum of **Five Hundred Dollars (\$500)** per the first minute and **Fifty Dollars (\$50)** for every minute thereafter that the Contractor continues a taxiway/runway closure beyond the specified time provided for opening the taxiway/runway during each phase of work that requires closure.

Time for opening of the taxiway/runway and rental fee determinations shall be based upon the City's inspector's time keeping, not the Contractor. Contractor may request the inspector to advise him of remaining time periodically prior to opening, but inspector's time keeping shall be the sole determining factor as to whether the taxiway/runway reopened as scheduled without appeal.

- 16.2 **No Extended Damages:** For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

ARTICLE 17 – SUSPENSION OF WORK AND TERMINATION

- 17.1 **City May Suspend Work:** The City may, at any time and without cause, suspend the Work or any portion of the Work for a period of not more than ninety (90) days by notice in writing to the Contractor which shall fix the date on which Work shall be resumed. The Contractor shall resume the Work on the date fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension, if the Contractor makes a claim as provided in Articles 14 and 15.
- 17.2 **City's Right to Terminate Contract:** The City may terminate this Agreement upon fifteen (15) calendar days' written notice upon the occurrence of any one or more of the following events:
- 17.2.1 If the Contractor makes a general assignment for the benefit of creditors.
 - 17.2.2 If a trustee, receiver, custodian or agent of the Contractor is appointed under applicable law or under Contract, whose appointment or authority to take charge of property of the Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of the Contractor's creditors.
 - 17.2.3 If Contractor fails to begin the Work within fifteen (15) calendar days after the Project Initiation Date, or fails to perform the Work with sufficient workers and equipment or with sufficient materials to ensure the prompt completion of the

Work, or shall perform the Work unsuitably, or cause it to be rejected as defective and unsuitable, or shall discontinue the prosecution of the Work pursuant to the accepted schedule or if Contractor shall fail to perform any material term set forth in the Contract Documents, or from any other cause whatsoever shall not carry on the Work in an acceptable manner, Project Manager may give notice in writing to Contractor and its Surety of such delay, neglect or default, specifying the same.

17.2.4 If the Contractor repeatedly fails to make prompt payments to subcontractors or for labor, material or equipment.

17.2.5 If the Contractor repeatedly disregards proper safety procedures.

17.2.6 If the Contractor disregards any local, state or federal laws or regulations.

17.2.7 If the Contractor otherwise violates any provisions of this Agreement.

17.3 If Contractor, within a period of ten (10) calendar days after such notice, shall not proceed in accordance therewith, the City may exclude the Contractor from the Work site and take the prosecution of the Work out of the hands of the Contractor, and take possession of the Work and all of the Contractor's tools, appliances, construction equipment and machinery at the site and use them without liability to the City for trespass or conversion, incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere, and finish the Work as the City may deem expedient. In this instance, the Contractor shall not be entitled to receive any further compensation until the Work is finished.

17.3.1 If after notice of termination of Contractor's right to proceed, it is determined for any reason that Contractor was not in default, the rights and obligations of City and Contractor shall be the same as if the notice of termination had been issued pursuant to the Termination for Convenience clause as set forth in Section 17.5 below.

17.3.2 Upon receipt of Notice of Termination pursuant to Sections 17.2 or 17.5, Contractor shall promptly discontinue all affected work unless the Notice of Termination directs otherwise and deliver or otherwise make available to City all data, drawings, specifications, reports, estimates, summaries and such other information as may have been required by the Contract Documents whether completed or in process.

17.4 If the Contractor commits a default due to its insolvency or bankruptcy, the following shall apply:

17.4.1 Should this Agreement be entered into and fully executed by the Parties, funds released and the Contractor (Debtor) files for bankruptcy, the following shall occur:

17.4.1.1 In the event the Contractor files a voluntary petition under 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303, the Contractor shall acknowledge the extent, validity, and priority of the lien recorded in favor of the City. The Contractor further agrees that in

the event of this default, the City shall, at its option, be entitled to seek relief from the automatic stay pursuant to 11 U.S.C. 362. The City shall be entitled to relief from the automatic stay pursuant to 11 U.S.C. 362(d) (1) or (d) (2), and the Contactor agrees to waive the notice provisions in effect pursuant to 11 U.S.C. 362 and any applicable Local Rules of the United States Bankruptcy Court. The Contactor acknowledges that such waiver is done knowingly and voluntarily.

17.4.1.2 Alternatively, in the event the City does not seek stay relief, or if stay relief is denied, the City shall be entitled to monthly adequate protection payments within the meaning of 11 U.S.C. 361. The monthly adequate protection payments shall each be in an amount determined in accordance with the Note and Mortgage executed by the Contractor in favor of the City.

17.4.1.3 In the event the Contractor files for bankruptcy under Chapter 13 of Title 11, United States Code in addition to the foregoing provisions, the Contractor agrees to cure any amounts in arrears over a period not to exceed twenty-four (24) months from the date of the confirmation order, and such payments shall be made in addition to the regular monthly payments required by the Note and mortgage. Additionally, the Contractor shall agree that the City is over secured and, therefore, entitled to interest and attorney's fees pursuant to 11 U.S.C. 506(b). Such fees shall be allowed and payable as an administrative expense. Further, in the event the Contractor has less than five (5) years of payments remaining on the Note, the Contractor agrees that the treatment afforded to the claim of the City under any confirmed plan of reorganization shall provide that the remaining payments shall be satisfied in accordance with the Note, and that the remaining payments or claim shall not be extended or amortized over a longer period than the time remaining under the Note.

17.4.2 Should this Agreement be entered into and fully executed by the parties, and the funds have not been forwarded to Contractor, the following shall occur:

17.4.2.1 In the event the Contractor files a voluntary petition pursuant to 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303., the Contractor acknowledges that the commencement of a bankruptcy proceeding constitutes an event of default under the terms of this Agreement. Further, the Contractor acknowledges that this Agreement constitutes an executory contract within the meaning of 11 U.S.C. 365. The Contractor acknowledges that this Agreement is not capable of being assumed pursuant to 11 U.S.C. 365(c)(2), unless the City expressly consents in writing to the assumption. In the event the City consents to the assumption, the Contractor agrees to file a motion to assume this Agreement within ten (10) days after receipt of written consent from the City, regardless of whether the bankruptcy proceeding is pending under Chapter 7, 11, or 13 of Title 11 of the United States Code. The Contractor further acknowledges that this Agreement is not capable of being assigned pursuant to 11 U.S.C. 365(b)(1).

- 17.5 **Termination for Convenience:** This Agreement may be terminated for convenience in writing by City upon thirty (30) days' written notice to Contractor (delivered by certified mail, return receipt requested) of intent to terminate and the date on which such termination becomes effective. In such case, Contractor shall be paid for all work executed and expenses incurred prior to termination in addition to termination settlement costs reasonably incurred by Contractor relating to commitments which had become firm prior to the termination. Payment shall include reasonable profit for work/services satisfactorily performed. No payment shall be made for profit for work/services which have not been performed.
- 17.6 Where the Contractor's service has been so terminated by the City, the termination shall not affect any rights of the City against the Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due the Contractor by the City will not release the Contractor from liability.
- 17.7 The Contractor has no right, authority or ability to terminate the Work except for the wrongful withholding of any payments due the Contractor from the City.

ARTICLE 18 – DISPUTE RESOLUTION

- 18.1 **Resolution of Disputes:** Questions, claims, difficulties and disputes of whatever nature which may arise relative to the technical interpretation of the Contract Documents and fulfillment of this Agreement as to the character, quality, amount and value of any work done and materials furnished, or proposed to be done or furnished under, or by reason of, the Contract Documents which cannot be resolved by mutual agreement of City Project Manager and Contractor shall be submitted to the City Manager or his designee and Contractor's representative for resolution. Prior to any litigation being commenced, for any disputes which remain unresolved, within sixty (60) days after final completion of the Work, the Parties shall participate in mediation to address all unresolved disputes to a mediator agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies provided under the laws of Florida. Failure by a Party to comply in strict accordance with the requirements of this Article, then said Party specifically waives all of its rights provided hereunder, including its rights and remedies under the laws of Florida.

18.1.1 All non-technical administrative disputes (such as billing and payment) shall be determined by Contract Administrator.

18.1.2 During the pendency of any dispute and after a determination thereof, Contractor and Contract Administrator shall act in good faith to mitigate any potential damages including utilization of construction schedule changes and alternate means of construction. During the pendency of any dispute arising under this Agreement, other than termination herein, Contractor shall carry on the Work and adhere to the progress schedule. The Work shall not be delayed or postponed pending resolution of any disputes or disagreements.

18.1.3 For any disputes which remain unsolved, within sixty (60) calendar days after Final Completion of the Work, the Parties shall participate in mediation to address all unresolved disputes. A mediator shall be mutually agreed upon by

the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies under applicable law. If a Party objecting to a determination, fails to comply in strict accordance with the requirements of this Article, said Party specifically waives all of its rights provided hereunder, including its rights and remedies under applicable law.

ARTICLE 19 – NOTICES

- 19.1 All notices required by any of the Contract Documents shall be in writing and shall be deemed delivered upon mailing by certified mail, return receipt requested to the following:

To the City:

City Manager
City of Fort Lauderdale
100 North Andrews Avenue
Fort Lauderdale, Florida 33301-1016

with copy to the:

Project Manager and City Attorney
City of Fort Lauderdale
100 North Andrews Avenue
Fort Lauderdale, Florida 33301-1016

To the Contractor:

ARTICLE 20 – LIMITATION OF LIABILITY

- 20.1 The City desires to enter into this Agreement only if in so doing the City can place a limit on the City's liability for any cause of action arising out of this Agreement, so that the City's liability for any breach never exceeds the sum of \$1,000. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Contractor expresses its willingness to enter into this Agreement with the knowledge that the Contractor's recovery from the City to any action or claim arising from the Agreement is limited to a maximum amount of \$1,000, which amount shall be reduced by the amount actually paid by the City to the Contractor pursuant to this Agreement, for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended either to be a waiver of the limitation placed upon the City's liability as set forth in Section 768.28, Florida Statutes (2021), as may be amended or revised, or to extend the City's liability beyond the limits established in said Section 768.28, Florida Statutes (2021), as may be amended or revised; and no claim or award against the City shall include attorney's fees, investigative costs, expert fees, suit costs or pre-judgment interest.

- 20.2 **No Extended Damages:** For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels on basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

ARTICLE 21 – GOVERNING LAW; WAIVER OF JURY TRIAL

- 21.1 The Agreement shall be interpreted and construed in accordance with, and governed by, the laws of the state of Florida. The Parties agree that the exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claims arising from, related to, or in connection with this Agreement must be litigated in federal court, the Parties agree that the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY AND ALL RIGHTS EITHER PARTY MIGHT HAVE TO A TRIAL BY JURY OF ANY ISSUES RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A REQUEST FOR A JURY TRIAL IN A LAWSUIT ARISING OUT OF THIS AGREEMENT AFTER WRITTEN NOTICE BY THE OTHER PARTY OF VIOLATION OF THIS SECTION, THE PARTY MAKING THE REQUEST FOR JURY TRIAL SHALL BE LIABLE FOR THE REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY IN CONTESTING THE REQUEST FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**

ARTICLE 22 – MISCELLANEOUS

- 22.1 The duties and obligations imposed by this Agreement and the rights and remedies available to the Parties and, in particular but without limitation, the warranties, guaranties and obligations imposed upon the Contractor and all of the rights and remedies available to the City, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents, and the provisions of this Paragraph will survive final payment and termination or completion of this Agreement.

- 22.2 The Contractor shall not assign or transfer this Agreement or its rights, title or interests. The obligations undertaken by the Contractor pursuant to this Agreement shall not be delegated or assigned to any other person or firm. Violation of the terms of this Paragraph shall constitute a material breach of Agreement by the Contractor and the City any, at its discretion, cancel this Agreement and all rights, title and interest of the Contractor which shall immediately cease and terminate.
- 22.3 The Contractor and its employees, volunteers and agents shall be and remain as independent contractor and not agents or employees of the City with respect to all of the acts and services performed by and under the terms of this Agreement. This Agreement shall not in any way be constructed to create a partnership, association or any other kind of joint undertaking or venture between the Parties.
- 22.4 The City reserves the right to audit the records of the Contractor relating in any way to the Work to be performed pursuant to this Agreement at any time during the performance and term of this Agreement and for a period of three (3) years after completion and acceptance by the City. If required by the City, the Contractor agrees to submit to an audit by an independent certified public accountant selected by the City. The Contractor shall allow the City to inspect, examine and review the records of the Contractor at any and all times during normal business hours during the term of this Agreement.
- 22.5 The remedies expressly provided in this Agreement to the City shall not be deemed to be exclusive but shall be cumulative and in addition to all other remedies in favor of the City now or later existing at law or in equity.
- 22.6 Should any part, term or provisions of this Agreement be decided by the courts to be invalid, illegal or in conflict with any state or federal law, the validity of the remaining portion or provision shall not be affected.
- 22.7 Prohibition Against Contracting With Scrutinized Companies: Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in Section 287.135, Florida Statutes (2021), as may be amended or revised. The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2021), as may be amended or revised, and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of Section 287.135, Florida Statutes (2021), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2021), as may be amended or revised, or is engaged in a boycott of Israel or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2021), as may be amended or revised.

By submitting a proposal or response, the company, principals, or owners certify that it is not listed on the Scrutinized Companies with Activities in Sudan List or listed on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is engaged in business operations in Cuba or Syria.

22.8 Public Entity Crimes: In accordance with the Public Crimes Act, Section 287.133, Florida Statutes (2021), as may be amended or revised, a person or affiliate who is a contractor, consultant or other provider, who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to the City, may not submit a bid on a contract with the City for the construction or repair of a public building or public work, may not submit bids on leases of real property to the City, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with the City, and may not transact any business with the City in excess of the threshold amount provided in Section 287.017, Florida Statutes (2021), as may be amended or revised, for category two purchases for a period of thirty-six (36) months from the date of being placed on the convicted vendor list. Violation of this section by Contractor shall result in cancellation of the City purchase and may result in Contractor debarment.

22.9 Attorney Fees: If City or Contractor incurs any expense in enforcing the terms of this Agreement through litigation, the prevailing Party in that litigation shall be reimbursed for all such costs and expenses, including but not limited to court costs, and reasonable attorney fees incurred during litigation.

22.10 Public Records

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2021), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this Agreement if the Contractor does not transfer the records to the City.

4. Upon completion of the Agreement, transfer, at no cost to the City, all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

SAMPLE CONSTRUCTION AGREEMENT

ARTICLE 23 – FAA REQUIRED CONTRACT PROVISIONS FOR AIRPORT CONTRACTS (AIP CONTRACTS)

23.11 Access to Records and Reports. The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the City, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives, access to any books, documents, papers, and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

23.12 Breach of Contract. Any violation or breach of terms of this contract on the part of the Contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

City will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. City reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the City elects to terminate the contract. The City's notice will identify a specific date by which the Contractor must correct the breach. Contractor may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the City's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

23.13 General Civil Rights Provisions. The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subtier Contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

23.14 Compliance with Nondiscrimination Requirements. During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

Non-discrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements

of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.

Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the City or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the City or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

Sanctions for Noncompliance: In the event of a Contractor's noncompliance with the Non-discrimination provisions of this contract, the City will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

- a. Withholding payments to the Contractor under the contract until the Contractor complies, and/or
- b. Cancelling, terminating, or suspending a contract, in whole or in part.

Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the City or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the City to enter into any litigation to protect the interests of the City. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

23.15 Title VI List of Pertinent Nondiscrimination Acts and Authorities. During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and Contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain existing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

23.16 Clean Air and Water Pollution Control. Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the City immediately upon discovery. The City assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds ~~\$150,000~~.

23.17 Contract Workhours and Safety Standards Act Requirements

1. Overtime Requirements.

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

23.18 Copeland "Anti-Kickback" Act. Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the City, a weekly statement on the wages paid to each employee performing on covered work during the prior week. City must report any violations of the Act to the Federal Aviation Administration.

23.19 Davis-Bacon Requirements

1. Minimum Wages

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

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(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

- (iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The Federal Aviation Administration or the City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- (i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

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(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, City, or City, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the City for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime Contractor to require a subcontractor to provide addresses and social security numbers to the prime Contractor for its own records, without weekly submission to the City.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;
- (2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;
- (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

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- (D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- (iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the City, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the City, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines

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that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility

- (i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

23.20 Texting When Driving. In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the City encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$3,500 and involve driving a motor vehicle in performance of work activities associated with the project.

- 23.21 Energy Conservation Requirements. Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 *et seq.*).
- 23.22 Equal Opportunity Clause. During the performance of this contract, the Contractor agrees as follows:
- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
 - (3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (4) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- (6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

23.23 Standard Federal Equal Employment Opportunity Construction Contract Specifications

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
- d. "Minority" includes:
 - (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

- (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000, the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation, and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period and the Contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

- n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a Contractor association, joint Contractor union, Contractor community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally,) the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

23.24 Prohibition of Segregated Facilities

- (a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.
- (b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.
- (c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

23.25 Procurement of Recovered Materials. Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- (a) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or,
- (b) The Contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at

www.epa.gov/epawaste/conserve/tools/cpg/products/.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the Contractor can demonstrate the item is:

- (a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- (b) Fails to meet reasonable contract performance requirements; or
- (c) Is only available at an unreasonable price.

23.26 Seismic Safety. The Contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

23.27 Termination for Convenience (Construction & Equipment Contracts). The City may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of City. Upon receipt of a written notice of termination, except as explicitly directed by the City, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the City all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.

6. Take action as directed by the City to protect and preserve property and work related to this contract that City will take possession.

City agrees to pay Contractor for:

- a. completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
- b. documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
- c. reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
- d. reasonable and substantiated expenses to the Contractor directly attributable to City's termination action

City will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the City's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

22.28 Termination for Default. The City may, by written notice of default to the Contractor, terminate all or part of this Contract if the Contractor:

1. Fails to commence the Work under the Contract within the time specified in the Notice-to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any City approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements;
6. Becomes insolvent or declares bankruptcy;

If one or more of the stated events occur, the City will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the City's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the City, the City has authority to acquire equipment by other procurement action. The Contractor will be liable to the City for any excess costs the City incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the City shall be at the Contract price. The City may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the City determines to be necessary to protect the City against loss because of Contractor default.

City will not terminate the Contractor's right to proceed with the Work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the City, acts of another Contractor in the performance of a contract with the City, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the City determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the City issued the termination for the convenience the City.

The rights and remedies of the City in this clause are in addition to any other rights and remedies provided by law or under this contract.

23.29 Veteran's Preference.

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier Contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

23.30 Disadvantaged Business Enterprises

Contract Assurance - The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment - The Contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than {specify number} days from the receipt of each payment the Contractor receives from {Name of recipient}. The Contractor agrees further to return retainage payments to each subcontractor within {specify the same number as above} days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

Fort Lauderdale Executive Airport Runway No. 9 Run-up Area Relocation
and South end Taxiways Intersection Improvements
(Contractor)
Project 12708

CITY

IN WITNESS OF THE FOREGOING, the Parties have set their hands and seals the day and year first written above.

CITY OF FORT LAUDERDALE, a Florida municipal
corporation

By: _____
CHRISTOPHER J. LAGERBLOOM
City Manager

Date: _____

ATTEST:

By: _____
DAVID R. SOLOMAN
City Clerk

Approved as to Legal Form:
Alain E. Boileau, City Attorney

By: _____
RHONDA MONTTOYA HASAN
Assistant City Attorney

CONTRACTOR

WITNESSES:

CONTRACTOR.,
a Florida company/corporation.

By: _____

Print Name

Print Name: _____

Title: _____

ATTEST:

Print Name

By: _____

Secretary

(CORPORATE SEAL)

STATE OF _____:

COUNTY OF _____:

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _____ day of _____, 2022, by _____, (NAME OF AUTHORIZED OFFICER) as _____ (TITLE OF AUTHORIZED OFFICER), for _____ (NAME OF COMPANY), a Florida _____ (TYPE OF COMPANY).

(Signature of Notary Public - State of Florida)_____
(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known _____ OR Produced Identification _____
Type of Identification Produced: _____

SUPPLEMENTAL CONDITIONS

SUPPLEMENTAL CONDITIONS**CITY PROJECT NO. 12708**

**SUPPLEMENTAL CONDITIONS
PROJECT 12708
FORT LAUDERDALE EXECUTIVE AIRPORT
RUNWAY 9 Runup Area and Southend Taxiways Intersection Improvements**

1. SUPPLEMENTAL CONDITIONS

The supplemental conditions included herein are intended to address items of work not included or addressed in the Construction Specifications. In case of a conflict, the Construction Specifications shall be subordinate to corresponding sections of the Supplemental Conditions.

2. CONSTRUCTION PROJECT COORDINATION PLAN

The purpose of the following outline is to establish guidelines to ensure operational safety during construction activities on the Fort Lauderdale Executive Airport. The primary document of reference, which is also made a part of these specifications and shall be adhered to by the Contractor is the U. S. Department of Transportation Federal Aviation Administration Advisory Circular 150/5370-2E (or latest revision) and its references.

It is the intent of the notes contained in this outline to establish a plan for construction on the Airport in order to maximize safety and minimize time and economic loss to the aviation community, along with construction contractors and others directly affected by the project. The following objectives should be targeted by the Contractor and must be considered when planning construction schedules and operational activities.

- A. Keep the Airport operational for all user aircraft.
- B. Minimize delays for aircraft operations.
- C. Maintain safety of aircraft operations.
- D. Minimize delays to construction operations.
- E. Minimize aircraft operation/construction activity conflicts.

Maximum, safe utilization of the Airport during construction is the ultimate goal to be achieved through communication and cooperative coordination between Contractor, jobsite Inspector (as a representative of the Engineer), the Airport Management, and the ATCT, as described herein.

- 2.1 All operations in airfield area to be performed only in coordination with the ATCT, Airport Management, and the Inspector assigned to the project.
- 2.2 Construction equipment regularly operating in the airfield area shall be marked with a flag on a staff, at least 36" square and a flashing amber light. Flag shall consist of a checkered pattern of international orange and white squares of not less than 1 foot on each side (in accordance with FAA AC 150/5210-5).

Vehicles (including all cars, trucks, construction equipment, etc.) are forbidden to penetrate aircraft movement areas or runway approach areas unless they are escorted by an authorized vehicle having the required radio, or are controlled by flagmen under a control plan approved in advance. Communication on radios shall be restricted to safety and coordination communications with the ATCT, and shall not be used for routine construction communications between contractor's personnel. All vehicles must obtain clearance from the control tower before entering aircraft movement areas. The control tower shall be informed of all activity within the aircraft movement areas

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Any vehicle or contractor personnel crossing any aircraft movement areas without notifying ATCT personnel shall be fined the maximum amount of \$500.00 and shall not be allowed back on the construction site.

- 2.3 Materials stockpile and storage, vehicle parking, location of construction office (if requested), and storage of equipment when not in use shall be as directed by the Engineer. The Contractor shall dispose of all surplus materials and facilities removed from the limits of work in a manner and to a location acceptable to the Engineer and Airport Management.

Materials to be reused shall be stockpiled as directed above, and salvaged facilities desired to be retained by the Airport shall be stored as directed by the Engineer. Other removed materials shall be placed in approved spoil areas or other approved locations. Any surplus fill so removed shall be neatly graded as directed by the Engineer.

- 2.4 The Contractor shall ascertain the location of and protect all existing and new FAA cables, airport lighting cables and facilities, and appurtenant facilities during construction and ensure that all circuits and facilities are maintained in a safe and properly operable condition. The local FAA Airway Facilities Sector Field Office (AFSFO) personnel will, upon request, mark all FAA cables in the vicinity of construction once, prior to the start of work. Contact number to call to request locations is (954) 467-7099. At least two weeks should be allowed for requested work to be completed. The Contractor shall be responsible for protecting cable location markings, and shall be responsible for any damage to cables within three feet of the marked cable route.

The Contractor shall also ascertain the location of all utility services (water, sewer, gas, electrical, power, telephone, etc.) within the work limits and ensure that continual and equal service is maintained during all construction activities.

Should any FAA, FP&L, AT&T, or other outside utility company's cable or facility be inadvertently cut, damaged, or disrupted, the owner of that cable or facility shall be notified immediately. The Contractor shall not make any splices or repairs in such cables or facilities unless specifically authorized by the owner of that cable or facility. The Contractor shall be responsible for the cost of any repairs required. The contractor shall be also responsible for any additional cost for hours for City's Resident Project Representative, Inspector, and/or construction phase services personnel associated this work. The cost will be credited back to City on the final payment application.

All locations indicated on the plans are approximate and shall be field verified prior to beginning construction.

- 2.5 The Contractor's activities must not degrade in any way the security provided by the airport perimeter fence, unless Airport Management approves specific exemptions to this provision in advance of construction activities. Any temporary gates installed or fencing relocated for the Contractor at his expense shall maintain this project in a secure condition at all times. The Contractor shall provide a security guard at each of his access points to the airport, unless they are locked and secured, in order to prevent unauthorized persons from entering and to direct authorized construction vehicles on the proper route to their destination within the airport. A portable guard house shall be utilized at all construction gates and shall be located in close proximity to the gate. An employee sitting in a car "watching the gate" shall not be acceptable. If any gate is found to be unlocked without a guard in place, or should the guard allow any access

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without verifying the proper authority for access, the Contractor shall be fined \$500 for each occurrence.

- 2.6 The Contractor shall be responsible for controlling smoke and dust or blowing sand or soil caused by construction activities using one or a combination of the following methods, to the satisfaction of the Engineer and the Airport Management:

- A. Application of water and/or calcium chloride (minimum of three times per day or as directed by the Engineer).
- B. Exposing the minimum area of erodible earth at one time.
- C. Applying temporary mulch with or without seeding (only in locations as approved by Airport Management).
- D. Using covered haul trucks.

Additionally, contractor shall be required to keep a vacuum sweeper vehicle with operator on duty during all hauling operations across pavement in use by aircraft. No additional compensation will be provided for dust or sand control.

- 2.7 Attractions for birds in the area of construction, such as trash, unprotected grass seeding, or ponded water must be avoided.
- 2.8 All electrical work shall be in strict accordance with the National Electric Code, latest edition. Electrical sub-contractor must furnish after hours contact phone number in case of emergency. This number must be an actual number and not an answering service.
- 2.9 Definitions:

Air Operations Area (AOA) - An AOA is any area of the airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An AOA shall include such paved or unpaved areas that are intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

NOTAM (Notice to Airmen) - NOTAMs are advisories issued by FAA Flight Service Station when conditions at an airport exist that could adversely affect safe aircraft operations such as construction related closures or hazardous conditions.

Any construction activity within 200 feet from runway centerline or within 65 feet from taxiway centerline will be considered to be within the AOA and will require closure of the affected areas (the exception being work specifically approved by Airport Management and FAA up to active aprons and taxiways). Such closures of an AOA must be coordinated with Airport Management at least 48 hours prior to commencing proposed work in order that arrangements can be made for issuance of applicable NOTAMs. The Contractor shall not close an AOA until so authorized by Airport Management and until the necessary temporary barricades and closure markings are in place. The sequence of construction phases and updated work schedules shall be provided to the Engineer to enable close coordination with aircraft routing and operations and maintain the currency of NOTAMs during the construction period. The Contractor shall also advise the Airport Management when situations have been improved to a point where NOTAMs may be cancelled. **Once a NOTAM has been issued, Contractor shall adhere strictly to the construction schedule agreed to for the NOTAM.**

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- 2.10 At times when **Runway 9-27** threshold is displaced, or equipment is operating in the ILS critical zone, the ILS must be taken off the air or ILS operations restricted by the ATCT. Also, when equipment is operating between a localizer antenna and its associated threshold, that localizer must be taken off the air. Due to such requirements, such work must be closely coordinated with the Airport Management requiring timing described above necessary for the issuance of applicable NOTAMs. If construction operations require shutdown of a navigational aid from service for more than 24 hours or in excess of 4 hours daily on consecutive days, a 45-day minimum notice is desirable prior to the facility shutdown. Additionally, the Contractor shall cease construction and remove all equipment from the critical area when directed by the FAA or airport personnel due to weather or other special operating conditions.
- 2.11 Definition:
- Federal Aviation Regulations (FAR) Part 77 - Objects Affecting Navigable Airspace** - Applicable section of this advisory establishes standards for determining obstructions in navigable airspace by establishing imaginary surfaces with relation to the airport and to each runway.
- No penetrations of the imaginary surfaces defined in FAR Part 77 shall be allowed unless approval is obtained from Airport Management and the FAA. When penetrations are unavoidable, approval should be requested as far in advance as is practical to allow, if such penetrations are acceptable, sufficient time for issuance of applicable NOTAMs. The Contractor shall prepare appropriate sketches with precise locations shown on the Airport Layout Plan along with elevations depicting the obstructing objects' relationship to the imaginary surfaces. Special approval must be obtained from Airport Management and the FAA for use of equipment exceeding a height of 30 feet. All exceptionally tall equipment (such as cranes, derricks, etc.) operating on the airport shall be in direct radio communication with the control tower (e.g., two-way radios, ground control frequency of 121.75 Mhz, operators proficient in English, experienced or trained in such communication and required response).
- 2.12 All excavations exceeding 3 inches depth and width or slopes greater than 5% within runway or taxiway or runway/taxiway safety areas shall be backfilled or covered prior to reopening the runway or taxiway. No open trenches (exceeding 3 inches depth and width) will be permitted overnight or over weekends within the runway/taxiway safety areas. The Engineer and Airport Management must approve any deviation from the requirements. All open trenches, stockpiled material, and excavation not within the areas described above shall be permanently marked with orange flags and lighted with flashing amber light units which shall operate continuously.
- 2.13 Runways and taxiways shall be kept free of all debris, dirt, trash, refuse, water bottles, soda cans, etc., at all times. Material tracked onto these areas shall be removed immediately. Contractor must keep a vacuum sweeper vehicle with operator on site with operator on duty during all hauling operations across pavement in use by aircraft. Continuous inspections will be made. See item 2.6 for approved methods of debris control.
- 2.14 Work on the airport is also in close proximity to potable water supply wellfields, requiring that extreme care be taken when handling fuel, oils, etc. Any spillages should be promptly and properly cleaned up. The stipulations of the Broward County Water Resources Management Division "Checklist for Surface Water Management" are permit requirements and dictate preventative measures necessitated by construction in such wellfield areas.

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- 2.15 Open flame welding or torch-cutting operations are prohibited unless adequate fire and safety precautions are provided and have been approved by the Engineer.
- 2.16 Construction safety meetings shall be established for the life of the contract to monitor, coordinate and adopt safety measures, on all matters of airport safety relating to this contract. Meetings will be scheduled by the Engineer at least once every week to discuss project schedule and applicable safety measures. These meetings shall be composed of the Contractor's superintendent, the Inspector, Airport Management, and (if available) the FAA/FDOT. In addition, representatives of the Fixed Base Operator (FBO) tenants may be invited, their attendance optional, and at their own discretion. The Owner reserves the right to amend the plan as necessary to maintain an acceptable level of safety during construction. Sub-contractors shall also be required to attend these meetings if they are scheduled to be performing any work on the project.
- 2.17 During the pre-construction Meeting, the Owner, the Contractor, the FAA, and the Engineer shall each designate a representative to be responsible for the safety aspects of the project. Each representative shall be available on a 24-hour basis. In addition, the Contractor shall designate a responsible representative on call 24 hours per day for emergency maintenance of airport hazard lighting and barricades.
- 2.18 In addition to the appropriate notification procedures, temporary runway and taxiway closures require that the applicable lighting circuits be disconnected during the closure period. Temporarily closed taxiways are usually treated as unusable, or hazardous, areas (as described below).
- 2.19 Hazardous areas, in which no part of an aircraft may enter, are indicated by use of barricades with alternate orange and white markings. The barricades are supplemented with orange flags at least 20 by 20 inches square and made and installed so that they are always in the extended position and properly oriented. For nighttime use, the barricades are to be supplemented with flashing red lights. The intensity of the lights and spacing for barricades, flags, and lights must be such that they adequately delineate the hazardous area.

3. PROTECTION OF WILDLIFE AND NATURAL HABITAT

The Contractor shall make provisions to protect the existing wildlife on the airport within the limits of this project. Known nests for burrowing owls and turtles are marked with a white PVC T in the ground. Contractor shall investigate the stockpile area, work area, and haul routes for marked and unmarked nests before storing materials and beginning construction. All unmarked nests shall be marked with a white PVC T. Existing markers shall not be removed without Engineer's approval. Nests shall be protected with the construction of temporary safety fencing. Said fencing to be placed within a 50-foot radius of nesting holes, to be approximately 3 feet in height, and to be made out of orange PVC material.

All reasonable efforts must be made by the Contractor to protect the existing wildlife and their nests. Nests that lie directly in the construction area that cannot co-exist with construction must be brought to the Engineer's attention. Nests may not be displaced or destroyed without the Engineer's approval.

Work areas and access to work areas shall be clearly delineated by the Contractor to avoid vehicular movement in turf areas that may contain nests or other features that could be damaged or destroyed by unnecessary traffic. All construction traffic shall be confined to paved areas to the greatest extent possible.

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SUPPLEMENTAL CONDITIONS**CITY PROJECT NO. 12708****4. PORTABLE CONSTRUCTION LIGHTING.**

The Contractor is responsible for providing work area lighting of sufficient quality and quantity to construct the Work to the quality standards called for in the Plans and Specifications. At a minimum the construction lighting shall meet the following requirements:

- a. For any construction that will be performed during nighttime hours the Contractor shall ensure that the work areas are adequately illuminated. A minimum of 10-foot candles of illumination shall be provided in the work areas, using maneuverable light plants with 1,000-watt metal halide floodlights, mounted as high as practicality will allow. The Contractor shall determine the number of light plants and their required spacing to achieve the illumination levels specified herein.

The light should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The pavement area shall be lighted at a maximum spacing of 100 feet from both sides to eliminate objectionable shadows. A demonstration of the adequacy of the lighting will be required prior to beginning any night work. The Contractor shall work with Airport Operations when determining positions for each portable light unit so that the lighting will not interfere with the vision of pilots or Air Traffic Control Tower personnel.

- b. For night work, the Contractor shall equip all paving machines, rollers, distributor trucks, and other equipment with artificial illumination to safely illuminate the area immediately surrounding their work areas.
- c. Contractor shall remove all equipment and store in the staging areas during non-working hours, and prior to the re-opening of the Runways.

5. STAND-BY EQUIPMENT

- a. The Contractor shall maintain stand-by equipment at the construction site for all construction work to be performed under this Contract. The specific number and type of equipment shall be that which is necessary to complete the work planned for that work period should any piece of equipment break down. At a minimum, at least one milling machine, one paving machine, and one roller will be required on stand-by whenever the taxiway is being worked on. The Contractor is advised that work during 24-hour per day closures, night closures, and weekend closures is more intensive than that performed at other times; therefore, additional stand-by equipment may need to be provided by the Contractor for the 24-hour per day closures, night closures, and weekend closure work.

Standby equipment includes equipment such as paving machines, milling machines, rollers, trenching machines, core drills, backhoes, graders, and tack coat distributor trucks and any other equipment necessary to complete the proposed work. In addition, stand-by clean up equipment such as sweepers, brooms, vacuum trucks, water trucks, and air compressors with wands for blowing debris from cracks, shall be available to ensure timely re-opening of the pavement at the end of each work period.

- b. Stand-by equipment may only be used to replace broken equipment during a work period. The Contractor shall properly repair or replace broken equipment before being allowed to proceed with the next work period.

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- c. The Contractor shall ensure arrangement for supply of enough material to re-open the construction area to aircraft operations in case of break down of an asphalt production plant. This will include back-up plants, storage of a minimum quantity of material, as required by Item P-401 " Plant Mix Bituminous Pavements" of the Specifications, in storage bins at the start of each shift's work, as well as material in trucks. In the event of an emergency beyond the control of the Contractor that reduces asphalt production during a work period, the Contractor may be permitted to mill out materials placed to meet grade or transition requirements. Any material milled to facilitate re-opening of the runway due to break-down of an asphalt plant or lack of stored material shall not be eligible for payment.
- d. The Contractor shall submit a listing and description of all regular and standby equipment that will be provided for 24-hour per day closures, night closures, weekend closures, and other work, by number, type, size, and manufacturer to the Engineer for acceptance.
- e. Should Contractor fail to have adequate standby equipment in place at beginning of each work shift, the Contractor shall be denied opportunity to continue for that work shift. Said denial shall only be lifted when Contractor provides adequate standby equipment. Contractor shall not be entitled to additional time to compensate for lost time due to inadequate standby equipment being available.
- f. Contractor shall maintain adequate equipment on site at all times to allow adequate clean up to open pavement for aircraft use. At a minimum, the Contractor shall have a vacuum truck and a power broom on site and ready for use.

6. PRE-PHASE COORDINATION MEETINGS.

At least 10 calendar days prior to beginning each phase of the Work, the Contractor shall hold a planning meeting to discuss, at a minimum, operational restrictions, work to be performed, haul routes (including Contractor signing and marking), closures, safety, testing requirements, submittal requirements, inspection requirements, schedule, communications, erosion control, stockpile locations and disposal schedule, location of stand-by equipment, salvaged materials container location, barricade layout, barricade placement schedule (including barricade storage areas during non-working hours) and other topics as appropriate. The Contractor shall submit a plan for all of the elements described above, to the Engineer for review, no less than 10 calendar days prior to each pre-phase meeting.

The Contractor shall prepare a construction traffic control plan for each haul route. The Contractor's traffic control plan shall conform to the requirements of the City traffic engineer, and shall be approved by the Engineer. The plan shall be included in Contractor's submittal for the pre-phase coordination meeting. When the haul route is not in use, all traffic control signs shall either be covered or removed and stored. The Contractor shall remove all construction signs after the completion of the work.

7. SCHEDULING AND DAILY OPERATIONS.

All work hours will be subject to written approval of the Engineer and Airport Operations, and in accordance with the approved work schedule. The Contractor shall also provide weekly and daily work plans. The Contractor shall have equipment and personnel staged and ready to occupy the site at the start time listed. **No runway closure will take place until the Contractor's equipment and personnel are in place as close as practical to the work area and ready to proceed into the work area and begin operations.** Prior to the end of each work shift, the Contractor shall arrange to have Airport Operations inspect the site to confirm that the site is being left in a satisfactory condition. The Contractor shall allow

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sufficient time to make any corrections and or cleanup items found to be deficient before opening at the required times listed. Any runway or taxiway safety area that does not pass the operations inspection shall remain closed until corrective measures are complete and approved by Airport Operations.

8. OPERATING CONDITIONS AND SAFETY.

All Contractor operations and activities shall comply with the requirements contained or identified in the Plans and these Specifications. Night work shall require use of sufficient portable light towers to provide safe and efficient operation conditions.

9. PHASING AND SCHEDULE NOTES.

All Contractor phasing and scheduling of construction operations and activities shall comply with the requirements contained or identified in the Plans and these Specifications. The phasing schedule represents the general sequence of the Work. Although the intent is for each phase to be completed in the order indicated, the Contractor may be directed by the Engineer to change the order of phases, at no additional cost to the Owner.

10. CONTRACTOR'S CORRECTIVE ACTION PLAN

Should contractor repeatedly fail to open a runway/taxiway on time, City may instruct Contractor to stop work until such time as Contractor presents a plan acceptable to the City to modify operations to ensure opening of runway/taxiway at the scheduled time. For the purposes herein, repeatedly shall be defined as 3 or more times. Should said work stoppage be found to be necessary, it is understood that it is due solely to the Contractor's failure to perform in accordance with the contract requirements and the Contractor shall not be entitled to any additional time for construction, nor shall he be entitled to any additional compensation for any cause alleged to be due to the work stoppage.

CONSTRUCTION SAFETY & PHASING PLAN

Construction Safety & Phasing Plan

Fort Lauderdale Executive Airport Runway 9 Run-up and Southend Taxiway Intersection Improvements



City Project No.: 12708

April 13, 2022

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Appendix A – Project Layout

Appendix B – Construction Project Daily Inspection Checklist

GENERAL INFORMATION AND SCOPE OF WORK

This Construction Safety and Phasing Plan is being submitted in compliance with FAA A/C 150-5370-2G, current edition.

This project is for milling and resurfacing of Taxiway Juliet and Taxiway Echo. It also includes milling and resurfacing Taxiway Alpha. The project also includes electrical replacement work.

See Appendix A for layout of proposed work.

CONSTRUCTION PHASING AND SAFETY PLAN REQUIREMENTS

1. Coordination

- (a) Contractor progress meetings-Contractor will attend a pre-construction meeting with airport personnel, City, Air Traffic Control Tower (ATCT) staff, consultant, and construction management/inspection personnel at a date prior to commencement of construction activities. This meeting will address project scope, contact personnel, correspondence requirements, safety issues, submittal requirements, pay application procedures, initial construction schedule, contractor access, haul routes, and any other items that the parties deem necessary.

Weekly construction progress meeting will be held with the contractor, airport personnel, ATCT personnel, consultant, and other affected parties to coordinate work activities and operational safety issues/concerns. Agenda items for these meetings shall include, but not be limited to: current project status, upcoming project/2-week look-ahead schedule, safety and phasing, contractor coordination and NOTAM's, change orders, and clean-up/FOD control. Meeting minutes will be provided to all attendees within 48 hours by e-mail. If requested, copies of all minutes will be provided to FAA Airport District Office (ADO) at the completion of the project.

- (b) Scope or schedule changes-Any changes to the work scope or the construction schedule will be reviewed by the proper airport personnel and consultant to determine if such modifications are warranted and to judge their potential impact on the project. Once reviewed, the CSPP will be revised to include such changes and will be forwarded to the FAA ADO for their review and approval.
- (c) FAA coordination-Airport will coordinate with FAA Air Traffic Organization (ATO) to notify them of any conditions that may adversely affect the operational safety of the airport as well as any relocation to NAVAID's during the construction phase. Airport will provide quarterly updates to FAA ADO on the status of the construction.

2. Phasing

- (a) Phase elements-Phasing for the construction is included in Appendix A. Construction staging areas and general notes, as well as access routes to the construction site are shown in Appendix A.
- (b) Construction safety drawings-Construction safety drawings, notes, and details for barricades are shown in Appendix A. Low level airfield barricades will be used on this project. These barricades will have warning lights attached to each end per the detail on Appendix A.

3. Areas and Operations Affected by the Construction Activity.

- (a) Identification of affected areas-The areas that will be primarily affected by the construction is the Runway Safety Area (RSA), Runway Object Free Area (ROFA), and Runway Obstacle Free Zone (ROFZ) along runways 9-27 and 13-31, as shown in Appendix A.
- (b) Mitigation of effects-Phasing plans call for the closing of runways 9-27 and 13-31 during various stages of the work. All closures will be coordinated with the ATCT and through NOTAM's issued by airport staff. The Contractor shall abide by the safety setbacks shown on the Construction Phasing plans.

4. Protection of Navigation Aids (NAVAIDs)

There are no NAVAIDs within the construction area.

5. Contractor Access.

- (a) Location of stockpiled construction materials-The contractor will not be permitted to stockpile materials or construction equipment within the RSA and ROFA. Equipment will be parked within the contractor's staging area at the end of the working day. Material and excavated fill will be removed from the site and taken to the contractor's staging area for disposal off-site (see Appendix A).
- (b) Vehicle and pedestrian operations- Vehicle parking for contractor personnel will be provided for in the staging and storage area off-site from the construction area as shown in Appendix A. Construction vehicles will be parked within the contractor's staging area.

Access/haul roads to the site shall be clearly marked with Type II barricades and will be clearly marked for the contractor. All construction vehicles shall be equipped with flashing amber dome-type light mounted on top of the vehicle as well as 36"x36" orange-and-white, checkerboard flag.

No vehicles will be allowed on the airfield without escort from airport/City personnel. In addition, all contractor personnel will be required to take an airfield training class prior to receiving their identification badges. These badges are to be worn by all construction personnel while on the airside. Any person not wearing a badge will be asked to show his badge or leave the site. Construction personnel will be given instruction on which areas of the airfield are off-limits without proper escort. Any incursion of these areas will result in a \$500 fine and removal from the project.

Communication with the ATCT will be through an airfield trained inspector, or security personnel, by two-way radio. The inspector will also provide escort to all construction personnel to and from the work site. Contractor will also be responsible for maintaining the security fencing and gates during construction.

6. Wildlife Management.

- (a) Trash-Contractor will be required to remove any waste/food material that may attract wildlife as well as avoid construction activities that will create wildlife hazards at the airport during construction. The contractor will emphasize to his employees the need

for daily foreign object debris (FOD) checks on or near active airfield pavements. FOD checks will be conducted daily at the end of each construction shift.

- (b) Standing water-Contractor will be required to avoid any activities that may cause standing water at the construction site and attract wildlife.
- (c) Poorly maintained fencing and gates-Contractor will be responsible for maintaining and replacing any damaged portion of the security fencing and gates during construction.
- (d) Disruption of existing wildlife habitat-Contractor shall make every effort to minimize disruption to the existing wildlife. If the contractor should come into contact with wildlife habitat at the site he shall immediately cease operations and inform the airport. The airport will use an environmental firm to determine what the best course of action will be to minimize any further impact to the wildlife.

7. Foreign Object Debris (FOD) Management.

Contractor will be required to remove any FOD from the work area and adjacent runway and taxiway. Prior to leaving the work area the contractor will be required to inspect the site with airport and inspection personnel to determine if the site is clear of FOD.

8. Hazardous Materials (HAZMAT) Management.

Contractor will be required to provide a spill prevention and clean-up plan in the case of a fuel or hydraulic fluid leak on the airport prior to being allowed on the work site and will conform to AC 150/5320-15.

9. Notification of Construction Activities.

- (a) Maintenance of a list of responsible representatives/points of contact-Contractor will be required to submit a contact list of all involved parties to include cell/phone numbers for contact after hours.
- (b) Notices to Airmen (NOTAM)-The airport operator will issue and cancel NOTAM's issued as part of the construction activities and coordinate said NOTAM's with tenants and ATCT personnel. Airport operator will also be responsible for providing information to the FAA Flight Service Station (FSS).
- (c) Emergency Notification Procedures-Emergency contact information for medical, firefighting, and police will be provided to the contractor by airport operations.
- (d) Coordination with ARFF Personnel-ARFF personnel will be informed during construction activities on the airfield. There will be no deactivation of water lines, hydrants, blocking of emergency access routes during the construction of the project.
- (e) Notification to the FAA-The airport has filed a notification with the ADO through the OEAAA.faa.gov website (ASN#: 2018-ASO-2012-NRA through 2018-ASO-2014-NRA).

10. Inspection Requirements.

- (a) Daily (or more frequent) inspections-Inspections will be conducted daily by airport operations staff in conformance with Appendix B-Construction Project Daily Inspection Checklist.
- (b) Final inspections-A final inspection will be held with the contractor, airport personnel, and consultants prior to formal acceptance of the project.

11. Underground Utilities.

The contractor will be required to coordinate with local utilities locating services, "One Call", airport personnel, and FAA ATO personnel to locate and protect any underground services prior to beginning any excavations on the site. Once the locations have been established, the contractor shall make all necessary arrangements to ensure that the facilities remain in a safe and operable condition during construction.

12. Penalties.

Contractor personnel entering a movement area without authorization shall be levied \$500 fine as well as removal from the job site. Personnel found to be on the jobsite without an airport issued identification badge will be immediately removed from job site. If security access gate is found to be left unmanned and unlocked, or should a guard under the employ of the contractor allow access to the work site without verifying the proper identification, the Contractor shall be fined \$500 for each occurrence.

13. Special Conditions.

Any security breach and/or Vehicle /Pedestrian Deviation (VPD) by the contractor or his personnel will be cause for the airport to suspend work until such matters are resolved to the airport's satisfaction and corrective measures have been taken by the contractor. All construction activity will be suspended in the event of an incident involving an aircraft in distress or airfield accident.

14. Runway and Taxiway Visual Aids, Marking, Lighting, Signs, and Visual NAVAIDs.

- (a) General-Construction operations will not obscure or damage existing markings, lighting, and signage. In addition, all new lighting and signage will be secured in place to prevent movement by jet blast/prop wash and will be mounted on frangible bases.
- (b) Markings-All airfield markings will be in compliance with A/C 150-5340-1L, current edition. Runways that will be temporarily closed to airport operations during construction will be marked with yellow lighted "X" placed on the runway designation numbers. Taxiway closure will be designated by low-level, lighted barricades placed at the entrance to the closed taxiway from the runway. These barricades will be maintained by the contractor.
- (c) Lighting and Visual NAVAIDs-All lighting will conform to AC 150/5340-30H, current edition. Light fixtures will be removed from the closed taxiway and lighting circuits will be disconnected. Temporary jumpers will be installed to maintain the airfield lighting system.

15. Marking and Signs for Access Routes.

Pavement markings will conform to AC 150/5340-1L, current edition, as indicated on the plans and specifications. All construction signage shall meet the requirements of the MUTCD, latest edition.

16. Hazard Marking and Lighting.

- (a) Purpose-To prevent pilots from entering construction areas that are closed to aircraft as well as prevent construction personnel from entering areas that are open to aircraft operations by use of warning indicators for both pilots and contractor personnel.
- (b) Equipment-Low-level airfield barricades equipped with flashing red-lights and flags will be used to close the work area to aircraft. The barricades shall be spaced no greater than 20' center-to-center. Sand bags will be used to hold the barricades in place against prop wash/jet blast.

The contractor will be responsible for maintaining the lights and barricades in working order throughout the project and shall have replacement flags, lights, and batteries on-site as well as designated employee that will be on call 24-hours/day to maintain the barricades.

17. Protection. Of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces.

- (a) Runway Safety Area (RSA)-The project will require work within the RSA of runways 9-27 and 13-31. As such, the runways will be closed during these operations and proper notices issued via NOTAM's.
- (b) Runway Object Free Area (ROFA)-All construction equipment will be removed from the ROFA at the end of the work day. In addition, no materials will be allowed to be stockpiled within the ROFA.
- (c) Taxiway Safety Area (TSA)-The project will require work within the Taxiway Safety Area (TSA). However, the work area will be closed off as shown on Appendix A during the construction period.
- (d) Taxiway Object Free Area (TOFA)-The project will require work within the TOFA. However, the work area will be closed off as shown on Appendix A during the construction period.
- (e) Obstacle Free Zone (OFZ)-The project will require work within the ROFZ of runways 9-27 and 13-31. As such, the runway will be closed during these operations and proper notices issued via NOTAM's.
- (f) Runway approach/departure surfaces-The project will require access to and from the work site that will be within the approach/departure surfaces of runway 13-31. Airport operations will coordinate movement within these areas with ATCT personnel and issue the proper NOTAM's.

18. Other limitations on construction.

- (a) Prohibitions-The following prohibitions will be in place during construction: No use of tall equipment such as cranes will be allowed unless a 7460-1 has been filed with the FAA; no open flame welding or torches will be allowed; no blasting on airport property; and no use of flare pots within AOA.
- (b) Restrictions-The contractor will not be allowed access to any areas outside of the work site without escort by airport or inspection personnel. In addition, the contractor will submit a Hurricane Preparedness Plan detailing how the contractor will secure the work area equipment and materials to prevent damage to the work and prevent materials and equipment from becoming a hazard to persons and property on the airfield.

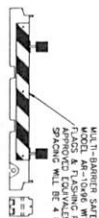
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APPENDIX A

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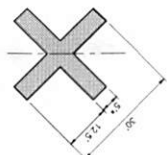
CONSTRUCTION SAFETY NOTES

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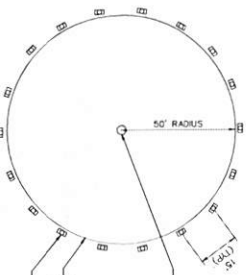
AIRFIELD BARRICADE

M.T.5



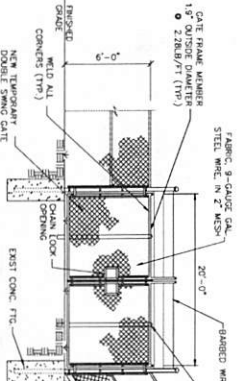
CLOSED TAXIWAY MARKING NOTES

2. THE CONTRACTOR SHALL PLACE TEMPORARY CLOSED TAYMAY MARKINGS ON THE ENTIRETY OF THE FACILITY TO BE CLOSED AS SHOWN ON PLANS OR AS DIRECTED BY THE ASSISTANT ENGINEER.
3. NO PAINTING WILL BE MADE FOR RELOCATIONS OF TEMPORARY CLOSED TAYMAY MARKINGS.



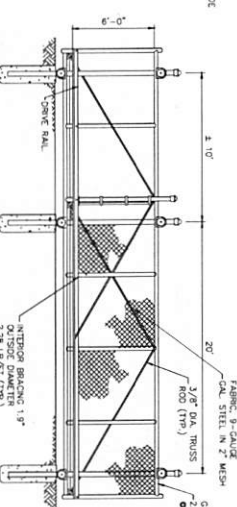
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NOTE: IF FULL FENCE ENCLOSURE IS
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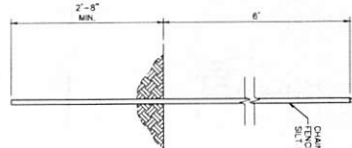


TEMPORARY SECURITY DOUBLE SWING CATT
N.T.

- TEMPORARY SLIDE
- NOTES:
1. TEMPORARY GATES TO BE REMOVED AFTER CONSTRUCTION IS COMPLETE. COST OF GATES ARE TO BE INCLUDED IN MOBILIZATION PAY ITEM. EXACT LOCATION TO BE COORDINATED WITH OWNER.



TEMPORARY SLIDE GATE DETAIL
N.Y.S.




TEMPORARY SECURITY FENCE DETAIL
N.T.S

- 26 AN INDICATION PERSONNEL WHO RECEIVE ACCESS TO THE
27 IDENTIFICATION PLACES DISPLAYED AT ALL IN-
28 FLYING, INCLUDING BUT NOT LIMITED TO, THE
29 FLYING, AND THE AIRPORT, AND ALL THE
30 CONTRACTOR SHALL ASSURE THE CONTRACTOR'S
31 CONTRACTOR SHALL ASSURE THE CONTRACTOR'S
32 CONTRACT FOR ALL INFORMATION AND RECORDS
33 DERIVED FROM THE AIRPORT'S AIRPORT AND
34 SMALL, CONDUCTED IN CONSTRUCTION ACTIVITIES
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PROJECT # 12455
TAXIWAY INTERSECTION
IMPROVEMENTS
SAFETY NOTES AND DETAILS

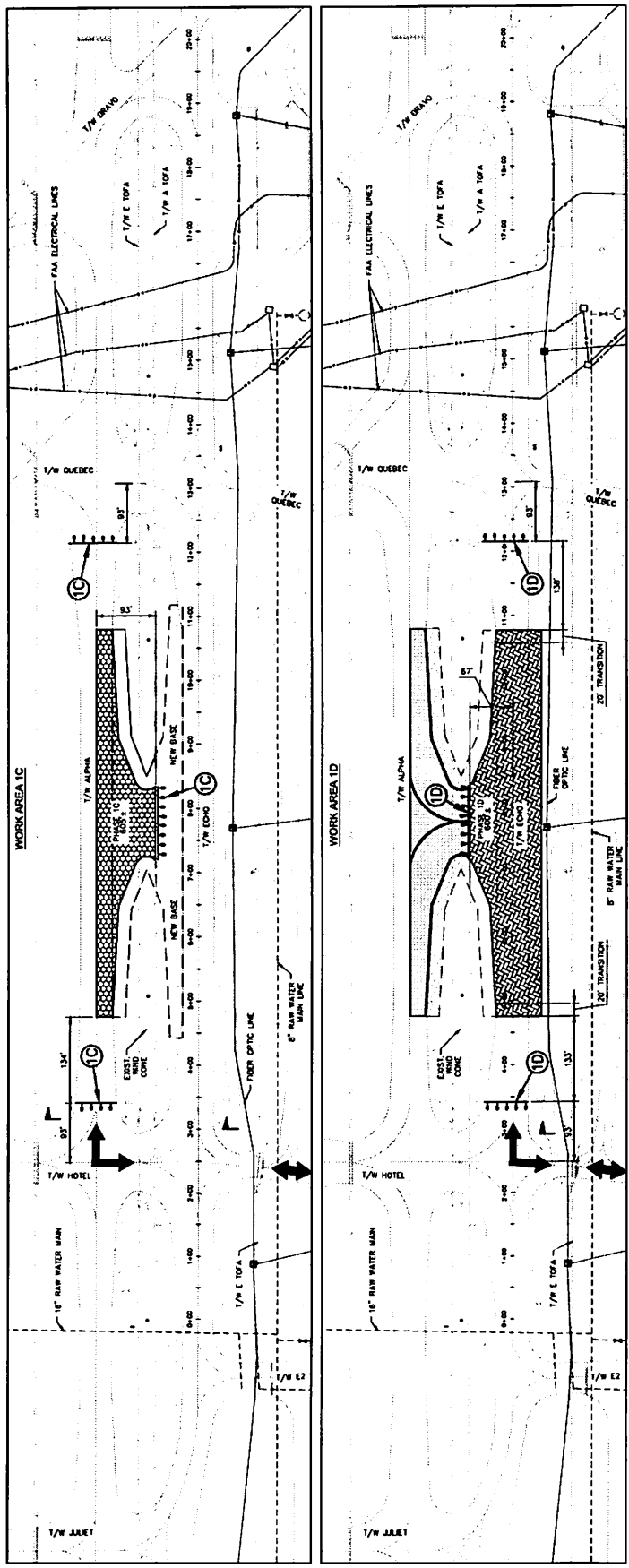
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| DRAWING FILE NO. | | |

 CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301








State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

THOMAS F.
O'DONNELL



LEGEND

| | |
|---|--|
|  | PHASE 1 AREA C |
|  | PHASE 1 AREA D |
|  | LOW LEVEL AIRFIELD BARRICADES |
|  | APPROXIMATE LOCATION BY PHASE NUMBER |
|  | TEMP. TAWAY CLOSURE MARKER SEE DETAIL SHEET C03 |
|  | HAUL ROUTE |
|  | FLAGMAN |

WORK AREA D. SOLUTIONS:
WORK IN THIS AREA WILL BE PERFORMED
SUBSEQUENTLY AFTER THE COMPLETION
OF PHASE 1 WORK AREA B.

WORK AREA D. SOLUTIONS:
WORK IN THIS AREA WILL BE PERFORMED
SUBSEQUENTLY AFTER THE COMPLETION
OF PHASE 1 WORK AREA C.

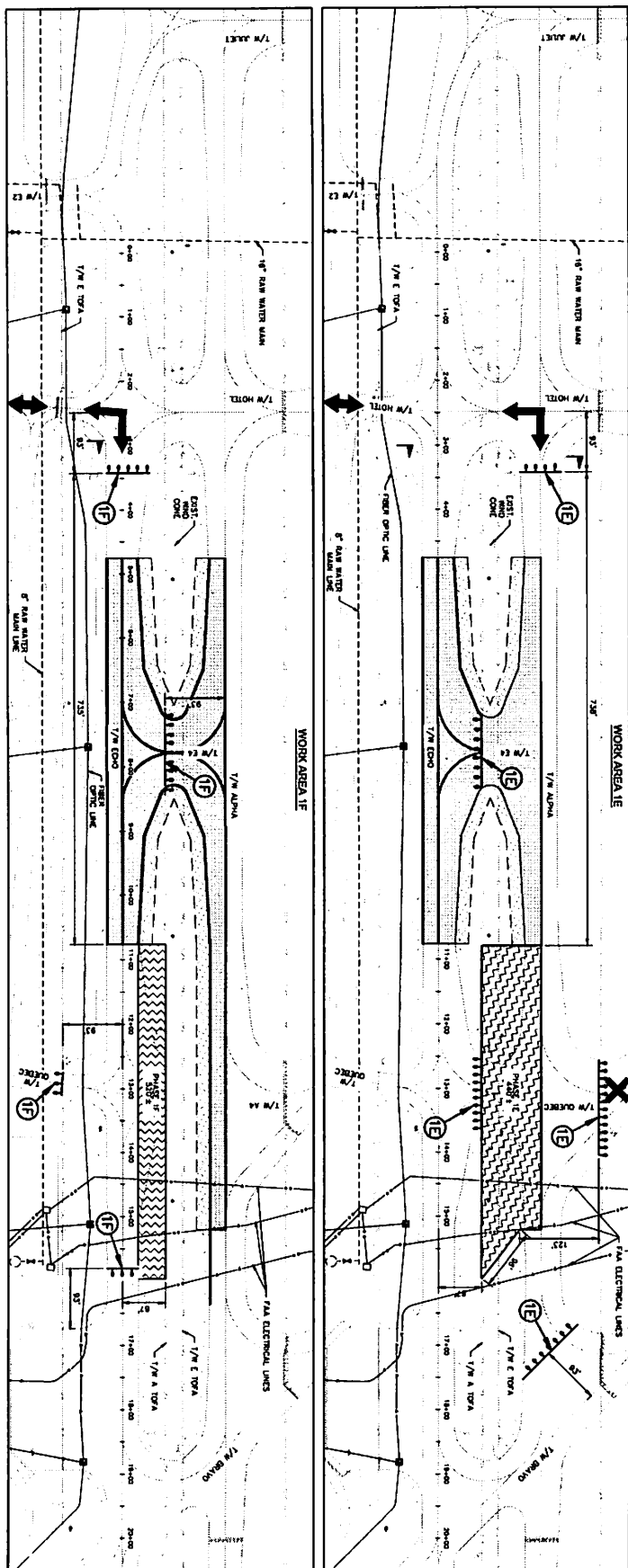
WORK AREA C, LINE 1 OF WORKS
THE LIMITS OF THIS WORK AREA ARE
THE AREA FROM 83° EAST OF
TAXWAY H TO 83° WEST OF TAXWAY
Q, AND FROM TAXWAY A SOUTH 83°

[illegible]

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| <p>CONSTRUCTION CONTROL MEASURES AT INTERSECTION WITH EXISTING HIGHWAY</p> | <p>CONSTRUCTION CONTROL MEASURES AT INTERSECTION WITH EXISTING HIGHWAY</p> |
|--|--|

[illegible]

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PHASE 1

- INDEX AREA 1: DESCRIPTION**
1. INSTALL BARRICADES AND TAPWAY CLOSURE MANNER.
 2. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.
 3. PERFORM FULL DEPTH PAVEMENT REPAIR, AND SEAL BITUMINOUS ASPHALT ON EXISTING TAPWAY ALPHA.
 4. PERFORM ELECTRICAL WORK.
 5. PERFORM EARTHWORK.
 6. PAVE (P-401) ASPHALT.
 7. APPLY TEMPORARY PLANT MAPPING.
 8. INSTALL TOPSOIL AND SEEDING.

CONSTRUCTION IN THE WORK AREA, SHOW, WILL REQUIRE THE CLOSING OF EXISTING LANEWAY Q SOUTH OF LANEWAY 9-27 AND NORTH OF LANEWAY E, LANEWAY A EAST OF LANEWAY H AND WEST OF LANEWAY R, AND LANEWAY E4, LANEWAY 9-27, LANEWAY 11-51 AND LANEWAY 11-52. THE PROJECT WILL BE CONDUCTED IN CONJUNCTION WITH OTHER PROJECTS PLANNED TO OCCUR IN THE SAME AREA. WORK WILL BE PERFORMED AS TO WORK PERmits, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM. CONTRACTOR TO RELOCATE BARBERC PLACEMENT WITH AIRPORT STAFF AND RECORD PROJECT REPRESENTATIVE.

WORK AREA

1. INSTALL BARRICADES
2. INSTALL DROPSHAW AND SEDIMENTATION CONTROL MEASURES
3. PERFORM FILL DITCH PAVERMENT REMOVAL
4. PERFORM ELECTRICAL WORK
5. PERFORM EARTHWORK
6. APPLY TEMPORARY PLANT BARBERS
7. INSTALL TOPSOILING AND SEEDING








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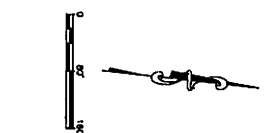
THE LIMITS OF THIS WORK AREA
THE AREA FROM 9.5' EAST OF
TADSWAY H TO 9.5' WEST OF TAD-
B. AND FROM 230' SOUTH OF
RUNWAY 9-27 TO 67' NORTH OF
TADSWAY E.

WORK AREA E SOUTHERN
WORK IN THIS AREA WILL BE
PERFORMED SEQUENTIALLY AFTER
THE COMPLETION OF PHASE 1 WORK
AREA D.

ORDER ARL 21010-2

THE LIMITS OF THIS WORK AREA ARE THE AREA FROM 93° EAST OF TAILWAY H TO 93° WEST OF THE HOLD DAY AIRPORT, AND FROM 93° SOUTH OF TAILWAY A TO THE TAILWAY D NON-MOVEMENT LINE.

- | LEGEND | |
|---|----------------------------------|
|  | STAIRS, STAIRS |
|  | BLIND AREA |
|  | LOW LEVEL MARKED BASEMENT |
|  | APPROACH TO BASEMENT LOCATION |
|  | TRANSFER TO CLOSING WINDOW |
|  | MAIL ROUTE |
|  | NORTH |



Industry News
Examination and Assessment, Inc.
 One month after its formation, on 10/1/90, the new company has received a contract from the U.S. Army to develop and deliver a course for the Army's new recruits. The course is titled "Introduction to the Army" and is a 10-day course. The company is currently in the process of developing the course and expects to deliver it in the near future.

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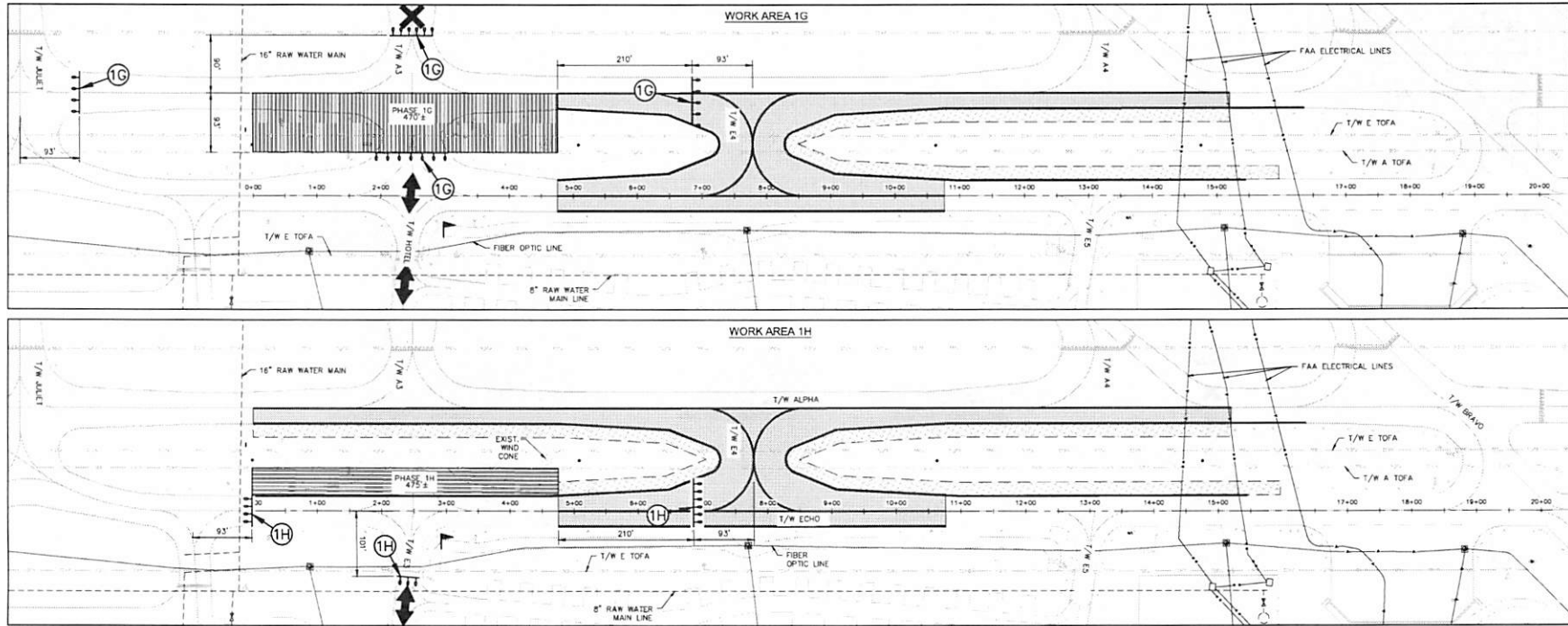
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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL



PHASE 1
WORK AREA G

WORK AREA G DESCRIPTION

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKER.
2. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.
3. PERFORM FULL DEPTH PAVEMENT REMOVAL AND MILL BITUMINOUS ASPHALT ON EXISTING TAXIWAY ALPHA.
4. PERFORM ELECTRICAL WORK.
5. PERFORM EARTHWORK.
6. PAVE (P-401) ASPHALT.
7. APPLY TEMPORARY PAINT MARKINGS.
8. INSTALL TOPSOILING AND SODDING.

WORK AREA G AIRCRAFT MOVEMENT

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF EXISTING TAXIWAY H SOUTH OF RUNWAY 9-27 AND NORTH TAXIWAY E EAST OF TAXIWAY EXISTING J AND WEST OF TAXIWAY E4. RUNWAY 9-27, RUNWAY 13-31, AND TAXIWAYS J, E4, AND B TO REMAIN OPEN. TAXIWAY E TO REMAIN OPEN WITH OPERATIONS LIMITED TO ADG II OR SMALLER AIRCRAFT. WORK WILL BE PERFORMED 8.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM. CONTRACTOR TO COORDINATE BARRICADE PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE.

WORK AREA G LIMIT OF WORK

THE LIMITS OF THIS WORK AREA ARE THE AREA FROM 93' EAST OF TAXIWAY J TO 93' WEST OF TAXIWAY E4, AND FROM 250' SOUTH OF RUNWAY 9-27 TO 93' SOUTH OF TAXIWAY A.

WORK AREA G SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 1 WORK AREA F.

PHASE 1
WORK AREA H

WORK AREA H DESCRIPTION

1. INSTALL BARRICADES
2. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.
3. PERFORM FULL DEPTH PAVEMENT REMOVAL.
4. PERFORM ELECTRICAL WORK.
5. PERFORM EARTHWORK.
6. PAVE (P-401) ASPHALT.
7. APPLY TEMPORARY PAINT MARKINGS.
8. INSTALL TOPSOILING AND SODDING.

WORK AREA H AIRCRAFT MOVEMENT

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF EXISTING TAXIWAY H SOUTH TAXIWAY A AND NORTH OF THE TAXIWAY H NON-MOVEMENT LINE, TAXIWAY E EAST OF TAXIWAY E2 AND WEST OF TAXIWAY E4. RUNWAY 9-27, RUNWAY 13-31, AND TAXIWAYS A, E4, AND E (BEYOND THE LIMITS OF WORK) TO REMAIN OPEN. WORK WILL BE PERFORMED 8.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM. CONTRACTOR TO COORDINATE BARRICADE PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE.

WORK AREA H LIMIT OF WORK

THE LIMITS OF THIS WORK AREA ARE THE AREA FROM 93' EAST OF TAXIWAY E2 TO 93' WEST OF TAXIWAY E4, AND FROM 93' SOUTH OF TAXIWAY A TO THE TAXIWAY H NON-MOVEMENT LINE.

WORK AREA H SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 1 WORK AREA G.

LEGEND

- PHASE 1, AREA G
- PHASE 1, AREA H
- LOW LEVEL AIRFIELD BARRICADES
- APPROXIMATE BARRICADE LOCATION BY PHASE NUMBER
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL SHEET C05
- HAUL ROUTE
- FLAGMAN



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10/1/18

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HILLERBACH ELECTRICAL, INC.
12444-1 (MULTI-PHASE 1)
10/1/18
10/1/18
10/1/18

State of Florida
Professional Engineer
License No. 62478
THOMAS F. O'DONNELL

DATE: 10/1/18
DESIGNED BY: SCALE: AS NOTED
CHECKED BY: TFO
PREP WORK

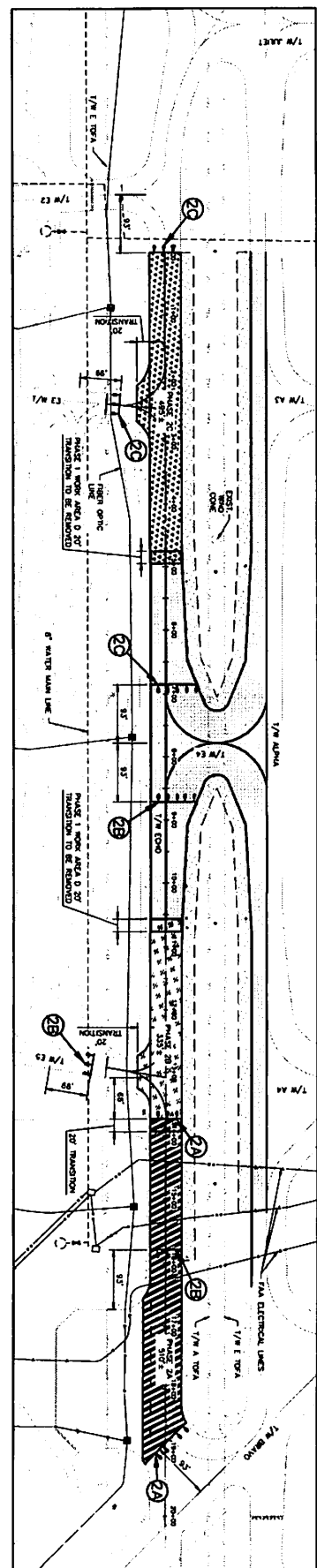
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PROJECT # 12455
TAXIWAY INTERSECTION
IMPROVEMENTS
PHASING PLAN 1 (4)

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CAD FILE: 12444-MULTI-PHASE1
DRAWING FILE NO: 4-141-47

BID SET



PHASE 2

INDEX AREA A DESCRIPTION

2. FILL EXISTING ASPHALT AS REQUIRED WITHIN LIMITS OF WORK.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. PAVE (P-401) ASPHALT.
5. APPLY THERMOPLASTIC PAINT MARKING.
6. INSTALL TOPSIGNAL AND SIGNALING.

WORK AREA DESCRIPTION

2. MEL BRUSHLESS ASPHALT AS REQUIRED WITHIN LIMITS OF WORK.
3. PERFORM ELECTRICAL CONNECTION AND INSTALLATION WORK.
4. PAVE (P-40) ASPHALT.
5. APPLY TOP-SURFACER PLANT MATERIAL.
6. INSTALL TOP-SURFACING AND SODDING.

INDEX

2. MEL BRUSHLESS ADHESIVE AS REQUIRED WITHIN UNITS OF WORK.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. PAVE (P-LOT) ASPHALT.
5. APPLY TEMPORARY PAINT MARKING.
6. INSTALL TOP-SOUND AND SPOORING.

MORRIS AREA A. AIRCRAFT MOVEMENT

CLOSING OF THE RUMUP AREA AND TAYNAY EAST OF TAYNAY
E3 AND WEST OF TAYNAY B, RUNWAY 9-27, RUNWAY 13-31,
TAYNAYS A, B, C (BETWEEN THE WORK AREA), B, E3, E4 AND E5
ARE TO BE KEPT CLOSED. WORK WILL BE PERFORMED 05 HOURS PER
DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM.
CONTRACTOR TO COORDINATE BARACODE PLACEMENT WITH AIRPORT
STAFF AND RECORD PROJECT REPRESENTATIVE.

WORK AREA 8

ИГОРЬ АЛЕКСАНДРОВИЧ АРСЕНАВ

CONSTRUCTION OF THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF TAYLOR E. EAST OF E4 AND WEST OF THE RAILWAY. AREA AND TAYLOR'S E4 NORTH OF ITS NON-MOVEMENT LINE. RAILWAY 9-27, RAILWAY 1-5-31, AND TAYLOR'S A, E (SECTION 2, WORK AREA), B, E2, G3 AND E4 ARE TO REMAIN OPEN. WORK WILL BE PERFORMED 6.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM. CONTRIBUTOR TO COORDINATE BARRICADE PLACEMENT WITH AIRPORT STAFF AND RECORD PROJECT REPRESENTATIVE.

WORK AREA C

МОДЕЛЬ АСТРА С АЭРОПАНИ МОУНТИН

CONSTRUCTION IN THE WORK AREA SHOWN WILL REDUCE THE CLOSURE OF TAYMAW E2 AND EAST OF TAYMAW E2 AND WEST OF TAYMAW E4 AND TAYMAW E3 NORTH OF ITS NON-ADJACENT TAYMAW E4-27, TAYMAW 1-31, TAYMAW A, E (BETWEEN THESE WORK AREAS), E1, E2, E3 AND E4 AND TO REPAIR OPER. WORK WILL BE PERFORMED 8-16 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM. CONTRACTOR TO COORDINATE BARBACQUE INCIDENT WITH AIRPORT STAFF AND RESORT PRODUCT REPRESENTATIVE.

WORK AREA ALIMIT OF WORK

THE AREA FROM 66' EAST OF TAXIMWAY
E5 TO 93' WEST OF TAXIMWAY B.

WORK AREA A SEQUENCING

SEQUENTIALLY AFTER THE COMPLETION OF PHASE 1 WORK AREA H.

MOCK APFA A UNIT OF MORRIS

THE AREA FROM 93' EAST OF
THE TAIWAY EA TO 93' WEST OF THE
RAILROAD AREA AND FROM TAIWAY E
SOUTH TO THE NON-MOVEMENT LINE.

INDEX AREA 2, SECOND CONC

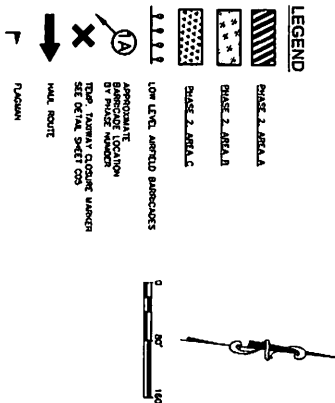
SEQUENTIALLY AFTER THE COMPLETION OF PHASE 2 WORK AREA A.

MOCK ABT. CIVIL OF MOORE

THE AREA FROM 95 EAST OF
TADWAY E2 TO 95 WEST OF TADWAY
E4 AND FROM TADWAY E SOUTH TO
THE TADWAY E3 NON-MOVEMENT
LINE.

INDEX AREA, C. STODOLNICK

SEQUENTIALLY AFTER THE COMPLETION OF PHASE 2 WORK AREA B.


[illegible]

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| DRAFT BY: MEM | DATE: 01/22/2021 |
| DRAWN BY: MEM | SCALE: AS NOTED |
| CHECKED BY: ITD | |
| FIELD BOOK: | |

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Professional Engineer
License No. 62476

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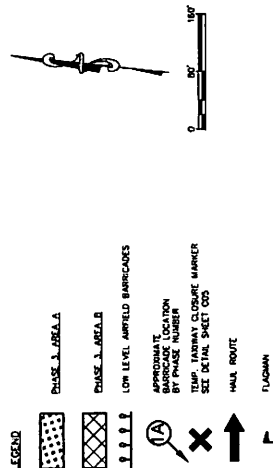
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PROJECT # 12455
TAXIWAY INTERSECTION
IMPROVEMENTS
PHASING PLAN 2



WORK AREA DESCRIPTION

1. ALLOW ASPHALT TO CURE 28 DAYS
2. INSTALL BARRICADES AS DIRECTED BY AIRPORT STAFF.
3. APPLY FINAL PAINT MARKING.
4. CORRECT EDGE CONDITIONS BY INSTALL FILL ALONG EDGES OF PAVEMENT.
5. PERFORM AND ALTERNATE ELECTRICAL WORK

[illegible]

MOR. AREA A AIRCRAFT MOVEMENT

WORK AREA LIMIT OF WORK
THE LIMITS OF THIS WORK AREA ARE THE AREA FROM 93' EAST OF RAILWAY E2 TO 93' WEST OF RUMUP APRON AND FROM TAXIWAY E SOUTH TO THE NON-MOVEMENT LINES.

WORK AREA A UNIT OF WORKS
THE EXACT LIMITS OF WORK AREAS
WILL BE DETERMINED IN THE FIELD.
CONTRACTOR WILL COORDINATE WITH
AIRPORT STAFF AND RESIDENT
WHO NOT REPRESENTATIVE

WORK AREA B SEQUENCING

WORK AREA A SEQUENCING

PHASE 3, AREA A

**CALL 48 HOURS
BEFORE YOU DIE**

**IT'S THE LAW:
DIAL 911**

**Know what's before you.
Call before you die.**

BARRING ENTRY ONE CALL OF AEROSOL INC.

Kittlinghorn
Kittlinghorn and Associates, Inc.
General Contractors and Builders
One E. 1st Avenue, Suite 100, Denver, CO 80202
Tel. 303.733.8888
Fax 303.733.8888

BID SET

PROJECT # 12433
TAXIWAY INTERSECTION
IMPROVEMENTS
PHASING PLAN 3

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

THOMAS F.
ODONNELL

[illegible]

| | | | | | |
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| | | | | | |
| DIRECTOR | COLORADO | STATE | OF | | |

APPENDIX B

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12/13/2017

AC 150/5370-2G

Appendix D

APPENDIX D. CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

| Item | Action Required (Describe) | No Action Required (Check) |
|--|-----------------------------------|-----------------------------------|
| Excavation adjacent to runways, taxiways, and aprons improperly backfilled. | | |
| Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking. | | |
| Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends. | | |
| Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ. | | |
| Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown. | | |
| Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and | | |

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Appendix D

| Item | Action Required (Describe) | No Action Required (Check) |
|---|----------------------------|----------------------------|
| approach zones. | | |
| Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area. | | |
| Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage. | | |
| Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards. | | |
| Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards. | | |
| Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports. | | |
| Obliterated or faded temporary markings on active operational areas. | | |
| Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards. | | |

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Appendix D

| Item | Action Required (Describe) | No Action Required (Check) |
|---|----------------------------|----------------------------|
| Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions. | | |
| Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications. | | |
| Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings. | | |
| Lack of radio communications with construction vehicles in airport movement areas. | | |
| Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations. | | |
| Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction. | | |
| Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways. | | |
| Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system). | | |

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Appendix D

| Item | Action Required (Describe) | No Action Required (Check) |
|--|-----------------------------------|-----------------------------------|
| Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits. | | |
| Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf. | | |
| Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it. | | |
| Site burning, which can cause possible obscuration. | | |
| Construction work taking place outside of designated work areas and out of phase. | | |

GENERAL REQUIREMENTS

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FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

**SECTION 011000
SUMMARY****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.
 - 1. The written specifications package entitled **Fort Lauderdale Executive Airport Runway 9 Runup Area and Southend Taxiway Intersection Improvements, City Project P12708**.

1.2 INTENT OF DRAWINGS AND SPECIFICATIONS

- A. Intent of the drawings and specifications is to cover an installation complete in every respect. It is not necessarily intended to provide every detail on drawings or in the specifications. The City will not be responsible for absence of any detail which the Contractor may require nor for any special construction which may be found necessary as work progresses. If an item is either indicated or specified, it shall be considered sufficient for inclusion of said item in the contract. Contractor shall furnish and install materials and equipment normally furnished with such systems and as needed to complete a fully operational installation, whether mentioned or not, which are customary to the trade.
- B. Incidental accessories not usually shown or specified, but which are necessary for the proper installation and operation shall be included in the work without additional cost to the City, as if herein depicted or specified.
- C. Any material or work not shown on drawings, but mentioned in specifications, or vice versa, shall be furnished, delivered and installed by the Contractor without additional cost to the City.
- D. Drawings are diagrammatic and indicate the general arrangement of systems and work indicated (do not scale drawings).

1.3 SUMMARY

- A. This Section includes the following:
 - 1. Project Information
 - 2. Work covered by the Contract Documents
 - 3. Phased construction
 - 4. Use of Premises
 - 5. Work restrictions
 - 6. Mobilization

1.4 PROJECT INFORMATION

- A. Project Identification: Project 12708
 - 1. Project Location: 6000 NW 21st Avenue, Fort Lauderdale, FL 33309

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

B. Owner: City of Fort Lauderdale

1. City's Representative: Khant Myat, P.E., Airport Engineer/Project Manager II

1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work is defined by the Contract Documents and consists of the following:

The work includes, but is not limited to the following: relocation of the run-up area apron along Taxiway Echo at the end of Runway 9 and installation of blast fence, lighting, sodding, and signage. The project also include for the re-alignment of taxiway Echo and Juliet on the southern end of runway 9. The taxiways will be extended into perpendicular taxiways by milling and resurfacing Taxiway Echo, striping, sodding and LED edge-lights and guidance signs will be installed.

1. Project will be constructed under a single prime contract.

a. Division of work: The division of work among it's separate Subcontractors is the responsibility of the General Contractor, and the City assumes no responsibility to act as arbitrator to establish subcontract limits between any sections of the work.

1.6 PHASED CONSTRUCTION

A. The Work shall be conducted in phases, with each phase substantially complete as indicated in the construction plans.

B. Before commencing Work of each phase, submit a schedule showing the sequence, commencement and completion dates for all phases of the Work.

1.7 USE OF PREMISES

A. General: Contractor shall have full use of project site for construction operations during construction period.

B. Use of Site: Limit use of project site to areas within the contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to City, City's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances.

b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.8 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations as listed here and in the construction plans.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

SUMMARY**011000-2**

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

- B. On-Site Work Hours: Work shall be generally performed as indicated in the construction plans.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by City or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify City not less than two working days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without City's written permission.
- D. Employee Identification: Owner will provide identification tags for Contractor personnel working on the Project site. Require personnel to utilize identification tags at all times.

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)**

END OF SECTION 011000

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

**SECTION 012600
CONTRACT MODIFICATION PROCEDURES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Engineer will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on form included following the end of Part 3.

1.4 REQUESTS FOR INFORMATION

- A. If latent or unforeseen conditions arise that may require changes in the Work, the Contractor may submit a Request for Information to the Project Manager on the form included following the end of Part 3.

1.5 PROPOSAL REQUESTS

- A. City-Initiated Proposal Requests: Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

effect of the change.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Engineer.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change.
 6. Comply with requirements in General Conditions Section GC-03 "Substitution" if the proposed change requires substitution of one product or system for product or system specified.

1.6 ADMINISTRATIVE CHANGE ORDERS

- A. Unit Price Adjustment: Refer to Construction Agreement, Article 14, for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit price work.

1.7 CHANGE ORDER PROCEDURES

- A. On City's approval of a Proposal Request, Engineer will issue a Change Order for signature of the Contractor on City's standard form. The Change Order will not be official until approved by the appropriate City Officials and signed by the City Engineer, City Manager.

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)**

END OF SECTION 012600

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PROJECT 12708

**SUPPLEMENTAL INSTRUCTIONS
FOR MINOR CHANGES**

CITY OF FORT LAUDERDALE

CITY PROJECT NO: #P

REQUEST NO: _____

PROJECT:

DATE:

OWNER: City of Fort Lauderdale

CONTRACTOR:

TO: _____

CONTRACT DATED: _____

The work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Prior to proceeding in accordance with these instructions, indicate your acceptance of these instructions for minor changes to the Work as consistent with the Contract Documents and return a copy to the City.

DESCRIPTION:

ATTACHMENTS:

ENGINEER:

FAXED TO: () Contractor
() Site Office
() Eng. Insp. (954) 828-5074

CC: Project Inspector
Main File

CONTRACT MODIFICATION PROCEDURES

012600-3

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

PROPOSAL REQUEST
CITY OF FORT LAUDERDALE

CITY PROJECT NO: #P

REQUEST NO: _____

PROJECT:

DATE:

OWNER: **City of Fort Lauderdale**

CONTRACTOR:

TO: _____

CONTRACT DATED: _____

Please submit an itemized quotation for changes in the **CONTRACT SUM** and/or **TIME** incidental to the proposed modifications to the Contract Documents described herein.

THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN.

DESCRIPTION:

ATTACHMENTS:

ENGINEER:

FAXED TO: () Contractor
 () Site Office
 () Eng. Insp. (954) 828-5074

CC: Project Inspector
 Main File

REQUEST FOR SUBSTITUTION
CITY OF FORT LAUDERDALE

CONTRACT MODIFICATION PROCEDURES

012600-4

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

CITY PROJECT NO: #P

REQUEST NO:

PROJECT:

OWNER: City of Fort Lauderdale

TO:

DATE:

CONTRACTOR:

CONTRACT DATED:

NAME AND ADDRESS OF CONTRACTOR:

hereby requests acceptance of the following product or system as an "acceptable substitution".

NAME AND DESCRIPTION OF SPECIFIED PRODUCT OR SYSTEM:

MANUFACTURER:

SPECIFICATION SECTION _____, PAGE(S) _____

PARAGRAPH(S) _____

DRAWING _____ DETAIL NUMBER _____

NAME AND DESCRIPTION OF PROPOSED SUBSTITUTION:

MANUFACTURER: _____

ADDRESS: _____

TELEPHONE: _____

NAME OF VENDOR: _____

NAME AND ADDRESS OF PREVIOUS PROJECT WHERE PROPOSED SUBSTITUTION WAS UTILIZED:

TELEPHONE: _____

REASON FOR PROPOSING SUBSTITUTION: _____

DOES SUBSTITUTION AFFECT OTHER MATERIALS, INSTALLATION OR SYSTEMS?

YES _____ NO _____ IF YES, ATTACHED COMPLETE DATA.

DOES SUBSTITUTION REQUIRE REVISION OR REDESIGN OF ANY COMPONENT OF BUILDING OR ELECTRICAL OR MECHANICAL WORK?

YES _____ NO _____ IF YES, ATTACHED COMPLETE DATA.

THE ATTACHED DATA IS FURNISHED FOR EVALUATION OF THE SUBSTITUTION:

() CATALOG () DRAWINGS () SAMPLES () TESTS () REPORTS () OTHER

REQUEST FOR SUBSTITUTION

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

SAVING TO CITY FOR ACCEPTING SUBSTITUTE:

COST OF SPECIFIED ITEM:

DOLLARS
(\$_____)

COST OF SUBSTITUTION ITEM:

DOLLARS
(\$_____)

TOTAL SAVINGS (CREDIT) TO CITY FOR ACCEPTING SUBSTITUTE:

DOLLARS
(\$_____)

THE UNDERSIGNED HEREBY CERTIFIES THAT THIS PROPOSED SUBSTITUTION HAS BEEN FULLY CHECKED AND COORDINATED WITH THE CONTRACT DOCUMENTS, THAT THE PROPOSED SUBSTITUTION MEETS OR EXCEEDS THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THAT ALL INFORMATION IS TRUE AND ACCURATE.

FIRM NAME: _____

BY: _____

DATE SIGNED: _____

PRINT NAME LEGIBLY: _____

FAXED TO:
CC

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

**SECTION 012900
PAYMENT PROCEDURES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.
- C. BASIS OF PAYMENT - The price for each items shall include the furnishing of all labor, materials, equipment and incidentals required to complete the construction and to repair in a manner satisfactory to the Engineer any and all damage, as a result of work under this contract, done to existing structures, pavement, grass, utility pipe lines, conduits, drains, catch basins, and including all above and underground obstructions not specifically named here-in: replacing in a manner satisfactory to the Engineer and or all of the above items which may be damaged beyond repair as a result of work under this contract.
- D. Retainage: The City shall retain a portion of each partial payment according to the following schedule:
 - 1. The City will retain ten percent (10%) of all monies earned by Contractor until the work has been accepted by the City as Finally Complete.

1.3 APPLICATIONS FOR PAYMENT

- A. The General Contractor must meet with the City Representative on or about the 25th of each month. The City Representative will go over the pay items and agree on the quantities and the dollar amounts of the work completed during the month. A copy of the agreed amounts will be signed by the parties and a copy will be left with each representative.
- B. The General Contractor will make up a partial pay request using the City-supplied forms and submit the request to the City Representative before the first of the upcoming month.
- C. Each pay request must be accompanied by a partial release of lien by the General

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PROJECT 12708

Contractor and by all Subcontractors, suppliers, and for all labor, as outlined below.

1. Starting with the second (2nd) pay request and for each and every pay request thereafter, the General Contractor shall submit partial release of liens from all Subcontractors, suppliers, and laborers covering the preceding month's request (SEE FOLLOWING EXAMPLE).
 2. EXAMPLE: In the first (1st) pay request, payment is requested by General Contractor for the electrician. The General Contractor must attach his partial release of lien.
 3. For the second (2nd) pay request, the General Contractor must attach his partial release of lien from the electrician for the amounts billed in the 1st pay request; i.e., the General Contractor will be running one (1) month behind with the releases from the Subcontractors, suppliers, etc., until the final pay request.
- D. For the final pay request, the General Contractor will be required to submit FINAL release of liens for ALL Subcontractors, suppliers, etc., and for ALL labor BEFORE FINAL PAYMENT WILL BE MADE.
- E. No partial payments, after the first payment, will be made until all partial release of liens are submitted for the preceding month's billing, as described
- F. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by City.
- G. Payment Application Forms: Use City Form "PERIODIC ESTIMATE FOR PARTIAL PAYMENT" as form for Applications for Payment.
1. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action.
 2. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- H. Release of Lien: With each Application for Payment, submit release of lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial release of lien on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final release of lien.
 3. City reserves the right to designate which entities involved in the Work must submit release of lien forms.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Contractor's Construction Schedule (preliminary if not final).
 3. Certificates of insurance and insurance policies.
 4. Performance and payment bonds.
- J. City may withhold, in whole or in part, payment to such extent as may be necessary to

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

protect itself from loss on account of:

1. Defective Work not remedied.
 2. Claims filed or reasonable evidence indicating probable filing of claims by other parties against Contractor or City because of Contractor's performance.
 3. Failure of Contractor to make payments properly to Subcontractors or for material or labor.
 4. Damage to another contractor not remedied.
 5. Liquidated damages and costs incurred by City and/or Consultant for extended construction administration.
 6. Failure of Contractor to provide any and all documents required by the Contract Documents.
- K. No partial payment estimate will be processed for any contract which is beyond the contract completion date. After a contract runs past the completion date, only a final payment will be made when all work is complete.
- L. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Evidence that claims have been settled.
 5. Final, liquidated damages settlement statement.
- M. The acceptance of final payment shall constitute a waiver of all claims by contractor, except those previously made in strict accordance with the provisions of the Contract and identified by Contractor as unsettled at the time of the application for final payment.
- N. If evidence is produced before the final settlement of all or any balance, that the party of the second part has failed to pay to laborers, employed on this work, or failed to pay for the materials used therein, or if the City has reason to suspect the same, the City may withhold such balance and, upon written evidence satisfactory to the City as to the amount due for such labor and materials, settle and pay for the same and charge the amounts to the party of the second part and deduct the same from said balance or balances.
- O. Payment for Insurance and Surety/Performance and Payment Bonds can be made upon submittal of the first contractor request for payment, less standard retainage.
- ~~P. The work specified in this Section shall consist of the preparatory work and operations in mobilizing for beginning work on the project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site; and for the establishment of temporary offices, testing services, safety equipment and first aid supplies, sanitary and other facilities, survey services, site clean up, restoration of disturbed sodded areas and photographs as required by these Specifications and Special Provisions, and any Federal, State and/or local laws and regulations. The costs of any other pre construction expense necessary for the start of the work, excluding the cost of construction materials, shall also be included in this Section.~~

~~Measurement of mobilization for payment shall be the work under this Section completed~~

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

~~and accepted in accordance with the Plans and these Specifications.~~

| Percent of Original | Allowable Percent of the Lump Sum |
|-----------------------------------|--|
| Contract Amount Earned | Price For Mobilization |
| 5 | 25 |
| 25 | 25 |
| 50 | 40 |
| 100 | 10 |

~~Partial payments for the item "Mobilization" shall be made in accordance with the above schedule and the sum total of all the partial payments for the item "Mobilization" will be limited to 10% of the original Contract Amount for the project. Any remaining amount will be paid upon completion of all work under the Project.~~

The standard retainage will be applied to these allowances. Partial payments made on this item shall in no way act to preclude or limit any of the provisions for partial payments otherwise provided for by the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708****SECTION 013100
PROJECT MANAGEMENT AND COORDINATION****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Coordination Drawings.
2. Submittals
3. Special Project Procedures
4. Administrative and supervisory personnel.
5. Project meetings.
6. Requests for Interpretation (RFIs).

- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

- C. Related Sections include the following:

1. Division 01 Section "Summary of Multiple Contracts" for a description of the division of Work among separate contracts and responsibility for coordination activities not in this Section.
2. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
3. Division 01 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
4. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.
5. Division 01 Section "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
- B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work.

PROJECT MANAGEMENT AND COORDINATION**013100-1**

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for City and separate contractors if coordination of their Work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Project closeout activities.

1.5 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate required installation sequences.
 - c. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Construction Project Manager for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
 2. Sheet Size: At least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches (750 by 1000 mm).

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3. **Number of Copies:** Submit two opaque copies of each submittal. Construction Project Manager will return one copy.
 - a. Submit five copies where Coordination Drawings are required for operation and maintenance manuals. Construction Project Manager will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
 4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.
- B. **Subcontract List:** Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number and title of related Specification Section(s) covered by subcontract.
- C. **Key Personnel Names:** Within 10 days of contract award, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.6 SPECIAL PROJECT PROCEDURES

- A. **Discrepancies, Errors:** Should discrepancies or errors appear in the drawings or specifications concerning materials, workmanship, or quantity of work to be performed, the Contractor will be required to immediately notify the City before proceeding with the work. If the Contractor fails to notify the City and proceeds with the work, Contractor will be required to correct the errors at his/her own expense. In the event of a conflict between the drawings and specifications, the City will decide on the way to perform the work or supply the materials. See also General Conditions, "Contractor to Check Plans and Data," Section GC-10
- B. **Dimensions and Measurements:** The figured dimensions on the drawings or notes including dimensions shall be used for construction instead of measurements of the drawings by scale. No scale measurements shall be used as a dimension for construction. Dimensions on all drawings as well as the detail drawings themselves are subject in every case to measurements of adjacent or previously completed work. All such measurements necessary shall be taken before undertaking any work dependent upon such data. Field verification of dimensions on plans is mandatory since actual locations, distances, and levels will be governed by actual field conditions.
- C. **Discrepancies or Inconsistencies:** Should any discrepancy or inconsistency appear between larger and smaller scale drawings in any of the divisions of the specifications or in any of the contract documents, such discrepancy shall be immediately submitted to the City for correction before proceeding with the work in question. In no case shall the Contractor make

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any alterations, erasures, changes or modifications in the drawings or specifications.

1. Should it appear that any of the work as specified or shown by the drawings is not sufficiently detailed or explained, the Contractor shall apply to the City for such further details or information as may be necessary for full understanding of the work in question.
 2. The data set forth in these specifications and indicated on the drawings are as accurate as can be obtained, but their extreme accuracy is not guaranteed. Final application thereto shall be determined on the job as conditions may demand and subject to the approval of the City.
- D. In the event a Subcontractor or Supplier notes a mistake or details appear incomplete, or if there are questions or concerns with the plans and specifications, the Subcontractor or Supplier will immediately notify the General Contractor. No work will proceed until such conflicts or questions are resolved in writing.

1.7 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. The Contractor shall employ a competent superintendent who can communicate with spoken English, and who shall be in attendance at the site full-time when any work is in progress. The superintendent shall be satisfactory to the City's Engineer and shall not be changed except with the consent of the City's Engineer.
- B. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
1. Include special personnel required for coordination of operations with other contractors.

1.8 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Construction Project Manager of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Construction Project Manager, within 48 hours of the completion of the meeting.
 - a. Minutes from all meetings shall be prepared by the Contractor, reflecting all items discussed as well as agreed upon or suggested solutions. These minutes shall be a true reflection of what actually happened at the meeting.
 - b. Items discussed and not resolved or being handled by any one of the parties present shall be reflected along with the name of the person responsible in all ongoing minutes until it is resolved.
 - c. Minutes shall be typewritten within 24 hours from the completion of the meeting. They shall immediately be delivered electronically to all parties present and followed by a copy through the mail to the Construction Project Manager.
 - d. All items requiring information and not resolved shall be reflected in each and every set of minutes thereafter until it is totally resolved

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- B. Initialization Meeting: Within ten (10) days of notification of contract award, the Contractor, the Construction Project Manager, the Designer of Record, and other assigned City's staff shall meet. The purpose of this meeting will be to quantify and clarify all items that must be presented by the Contractor at the Preconstruction meeting. The Contractor shall submit a schedule of values for the Project at this meeting for review by the City. The City's comments will be presented to the Contractor at the pre-construction meeting.
- C. Preconstruction Meeting: After the contract(s) has been awarded, executed, and a tentative work schedule has been composed, and prior to the start of the work, the Contractor(s), the Construction Project Manager, the City's Representative, and other persons and/or governmental agencies that are involved shall meet. The minimum agenda is to include but is not limited to the following:
1. Distribute and discuss list of major Subcontractors
 2. Tentative construction schedule
 3. Phasing
 4. Critical work sequencing and long-lead items
 5. Relation and coordination of Prime Contractor
 6. Designation of key personnel and their duties
 7. Procedures for processing field decisions and Change Orders
 8. Procedures for RFIs
 9. Procedures for testing and inspecting
 10. Adequacy of distribution of contract documents
 11. Submittal of Shop drawings, project data, and samples
 12. Procedures for maintaining Record documents
 13. Use of premises
 14. Work restrictions
 15. Responsibility for temporary facilities and controls
 16. Major equipment deliveries and priorities
 17. Working hours
 18. Safety and first-aid procedures
 19. Security procedures
 20. Housekeeping procedures including progress cleaning.
 21. Processing of payments or contract.
- D. Progress Meetings: Conduct progress meetings at bi-weekly intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of City and the Construction Project Manager, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Review and approve minutes of previous Progress Meeting.
 - b. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties

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involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

c. Review present and future needs of each entity present, including the following:

- 1) Interface requirements.
- 2) Sequence of operations.
- 3) Status of submittals.
- 4) Deliveries.
- 5) Off-site fabrication.
- 6) Access.
- 7) Site utilization.
- 8) Temporary facilities and controls.
- 9) Work hours.
- 10) Hazards and risks.
- 11) Progress cleaning.
- 12) Quality and work standards.
- 13) Status of correction of deficient items.
- 14) Field observations.
- 15) RFIs.
- 16) Status of proposal requests.
- 17) Pending changes.
- 18) Status of Change Orders.
- 19) Pending claims and disputes.
- 20) Documentation of information for payment requests.

3. Minutes: General Contractor shall record the meeting minutes. These minutes shall indicate all items discussed as well as agreed upon or suggested solutions. They shall be a true reflection of what occurred at the meeting.

4. Reporting: Within 48 hours, distribute minutes of the meeting by electronic means to each party present and to parties who should have been present.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.9 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and
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the following:

1. City Project Number
 2. City Project Name.
 3. Date.
 4. Name of Contractor.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: Form at end of this Section.
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above. Word Template is available upon request from the City Engineer's Office.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Construction Project Manager's Action: Construction Project Manager will review each RFI, determine action required, and return it. Allow seven days for Construction Project Manager's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Construction Project Manager's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Construction Project Manager's action may include a request for additional information, in which case Construction Project Manager's time for response will start again.
 3. Construction Project Manager's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

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- a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Construction Project Manager in writing within 10 days of receipt of the RFI response.
- F. On receipt of Construction Project Manager's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Construction Manager within seven days if Contractor disagrees with response.
- G. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Include the following:
 1. Project name.
 2. Name and address of Contractor.
 3. RFI number including RFIs that were dropped and not submitted.
 4. RFI description.
 5. Date the RFI was submitted.
 6. Date Construction Project Manager's response was received.
 7. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 8. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.10 MAINTENANCE OF AIRPORT OPERATIONS TRAFFIC**A. DESCRIPTION:**

1. The work specified in this Section consists of maintaining traffic within the limits of the project for the duration of the construction period. It shall include the construction and maintenance of any necessary detour facilities along the project and the furnishing, installing and maintaining of traffic control and safety devices required for safe and expeditious movement of traffic as may be called for on the plans. The term "Maintenance of Traffic" or MOT as used herein shall include all of such facilities, devices and operations as are required for the safety and convenience of the public as well as for minimizing public nuisance; all as specified in this Section. The Section also includes installing temporary orange plastic fencing around any owl or tortoise nests, as directed by the Project Manager or Owner's Representative.
2. When the project plans include or identify a specific Maintenance of Traffic Plan, alternate proposals will be considered when they are found to be equal to or better than the plan specified. In no case may the Contractor begin work until the Project Manager has approved the Maintenance of Traffic Plan in writing. Modifications to the Maintenance of Traffic Plan that become necessary shall also be approved in writing. Except in an emergency, as determined by the Project Manager, no changes to the approved plan will be allowed until approval to change such plan has been received.
3. The Contractor shall conduct their operations in such a manner that no undue hazard will result due to the requirements of this section, and the procedures and policies described therein shall in no way act as a waiver of any of the terms of the liability of the Contractor or their surety.

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1. The contractor shall be responsible for performing daily inspections, including weekends and holidays, with some inspections at nighttime, of the installations on the project and replace all equipment and devices not conforming to the approved standard during that inspection. The project personnel will be advised of the schedule of these inspections and be given the opportunity to join in the inspection as is deemed necessary.
2. The responsibility for installation and maintenance of adequate traffic control devices, warning devices and barriers, for the protection of the traveling public and workers, as well as to safeguard the work area in general shall rest with the Contractor. The required traffic control devices, warning devices and barriers shall be erected by the Contractor prior to creation of any hazardous condition and in conjunction with any necessary rerouting of traffic. The Contractor shall immediately remove, turn or cover any devices or barriers that do not apply to existing conditions.

The Contractor shall make the Project Manager aware of any scheduled operation which will affect traffic patterns or safety sufficiently in advance of commencing such operation to permit their review of the plan for installation of traffic control devices, warning devices, or barriers proposed by the Contractor.

The Contractor shall assign one of their employees the responsibility of maintaining the position and condition of all traffic control devices, warning devices and barriers throughout the duration of the contract. The Project Manager shall be kept advised at all times as to the identification and means of contacting this employee on a 24-hour basis.

3. All traffic control devices (including signs), warning devices, barricades and barriers shall be furnished by the Contractor.
4. Traffic control devices, warning devices, and barriers shall be kept in the correct position, properly directed, clearly visible and clean at all times. Damaged, defaced or dirty Devices or barriers shall be immediately repaired, replaced or cleaned as directed.
5. The Contractor shall provide competent flagmen to direct traffic where one-way operation in a single lane is in effect and in other situations as may be required by the standards established.
6. Where a detour changes the lane use or where normal vehicle paths are altered during construction, all existing pavement markings that will be in conflict with the adjusted vehicle paths shall be removed. Over-painting will not be allowed. The removal may be accomplished by any method that will not materially damage the surface texture of the pavement and which will eliminate the previous marking pattern regardless of weather and light conditions.

All pavement markings that will be in conflict with "next phase of operation" vehicle paths shall be removed as described above, prior to opening to traffic, when possible. Markings that cannot be removed prior to changing traffic patterns will be removed as soon as practicable. The term "practicable" shall be interpreted as meaning or implying:

- a. Marking removal equipment will be scheduled for use immediately following any change in lanes.

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- b. If darkness or inclement weather interferes with removal operations, such operations will be accomplished during the next daylight period or as soon thereafter as weather conditions permit.
 - c. If equipment failures occur such equipment will be repaired, replaced, or leased so that the removal can be accomplished by the following day.
- 7. The Contractor shall provide portable light towers as required for work. The towers shall be trailer mounted, that can be folded for easy transport and storage. The towers shall contain a diesel generator to power a minimum 6000 watts and have fuel capacity to operate at full load for a minimum of 48 hours. It shall be designed to be weather proof. The towers shall be telescoping and capable of rotating over 360 degrees and shall have a minimum of four (4) 1000 watt metal halide floodlights.

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)**

END OF SECTION 013100

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SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Startup Construction Schedule.
2. Contractor's Construction Schedule.
3. Submittals Schedule.
4. Daily construction reports.
5. Material location reports.
6. Site condition reports.
7. Special reports.

- B. Related Sections include the following:

1. Division 01 Section "Summary of Multiple Contracts" for preparing a combined Contractor's Construction Schedule.
2. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
3. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
4. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
5. Division 01 Section "Photographic Documentation" for submitting construction photographs.
6. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by the Construction Project Manager.

- C. CPM: Critical path method, which is a method of planning and scheduling a construction

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project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either City or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Milestone: A key or critical point in time for reference or measurement.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file in MS Project.
 - 2. PDF electronic file.
 - 3. **Two (2)** paper copies.
- B. Startup construction schedule.
 - 1. Approval of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
- D. Daily Construction Reports: Submit **one (1)** copy at **weekly** intervals.
- E. Field Condition Reports: Submit **one (1)** copy at time of discovery of differing conditions.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

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1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS**2.1 SUBMITTALS SCHEDULE**

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule and network diagram. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to proceed to date of Final Completion.
- B. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
2. Activity Duration: Define activities so no activity is longer than ten (10) days, unless specifically allowed by Construction Project Manager.
 3. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 4. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.

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5. **Substantial Completion:** Indicate completion in advance of date established for Substantial Completion, and allow time for Construction Project Manager's administrative procedures necessary for certification of Substantial Completion.
 6. **Punch List and Final Completion:** Include not more than **thirty (30)** days for completion of punch list items and final completion.
- D. **Constraints:** Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. **Phasing:** Arrange list of activities on schedule by phase.
 2. **Work Stages:** Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Installation.
 - e. Tests and inspections.
- E. **Milestones:** Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, Final Completion.
- F. **Upcoming Work Summary:** Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
 2. Unanswered Requests for Information.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
 5. Pending modifications affecting the Work and Contract Time.
- G. **Recovery Schedule:** When periodic update indicates the Work is **fourteen (14)** or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and dating by which recovery will be accomplished.
- H. **Computer Software:** Prepare schedules using a program that has been developed specifically to manage construction schedules.
1. Microsoft Project 2010 for Windows 7 operating system.

2.3 STARTUP CONSTRUCTION SCHEDULE

- A. **Bar-Chart Schedule:** Submit preliminary horizontal bar-chart-type construction schedule seven (7) days prior to the date established for the Pre-Construction Conference.
- B. **Preparation:** Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first

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ninety (90) days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within **fourteen (14)** days of date established for the Notice to Proceed. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require 3 months or longer completing, indicate an estimated completion percentage in **ten (10)** percent increments within time bar.

2.5 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events.
 - 10. Orders and requests of authorities having jurisdiction.
 - 11. Change Orders received and implemented.
 - 12. Construction Change Directives received and implemented.
 - 13. Services connected and disconnected.
 - 14. Substantial Completions authorized.
- B. Site Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION**3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.
 - 1. In-House Option: City may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
 - 2. Meetings: Scheduling consultant shall attend all meetings related to Project progress,

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alleged delays, and time impact.

- B. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- C. Distribution: Distribute copies of approved schedule to Construction Project Manager, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

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**SECTION 013233
PHOTOGRAPHIC DOCUMENTATION****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
1. Preconstruction photographs.
 2. Periodic construction photographs.
 3. Final Completion construction photographs.
 4. Preconstruction video recordings.
 5. Periodic construction video recordings.
 6. Web-based construction photographic documentation.
- B. Related Sections include the following:
1. Division 01 Section "Submittal Procedures" for submitting photographic documentation.
 2. Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.
 3. Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.
 4. Division 02 Section "Structure Demolition" for photographic documentation before building demolition operations commence.
 5. Division 02 Section "Selective Structure Demolition" for photographic documentation before building demolition operations commence.
 6. Division 31 Section "Site Clearing" for photographic documentation before site clearing operations commence.

1.3 INFORMATIONAL SUBMITTALS

- A. Construction Photographs: Submit digital media files of each photographic view within **seven (7)** days of taking photographs.
1. Format: Minimum 3200 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph. File names shall be in the following format: City project number – date taken (YYMMDD) – picture number (example: 10350-090408-011 would indicate project number 10350 taken on April 8, 2009 photograph number 11). Submit on CD with folders for separate dates.
 2. Identification: On jewel case and CD, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name of Contractor.

PHOTOGRAPHIC DOCUMENTATION

013233-1

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- c. Dates photographs were taken.

1.4 COORDINATION

- A. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site.

1.5 USAGE RIGHTS

- B. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

PART 2 - PRODUCTS**2.1 PHOTOGRAPHIC MEDIA**

- A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

PART 3 - EXECUTION**3.1 CONSTRUCTION PHOTOGRAPHS**

- A. Aerial Photographer: Engage a qualified commercial aerial photographer to take aerial construction photographs.
- B. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
- C. Daily Progress Photographs: Take daily photographs to document progress. Take photographs of all work that will be concealed by subsequent construction activity. Such photographs shall fully document actual installed conditions.
- D. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
1. Date and Time: Include date and time in filename for each image.
 2. Field Office Images: Maintain one set of images accessible at the field office at Project site, available at all times for reference. Identify images same as for those submitted to Architect.
- E. Preconstruction Photographs: Before **commencement of excavation, commencement of demolition, or starting construction**, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, or, as directed by Architect.
1. Flag **excavation areas** and **construction limits** before taking construction photographs.
 2. Take **ten (10)** photographs to show existing conditions adjacent to property before starting the Work.

- F. Periodic Construction Photographs: Take minimum **ten (10)** photographs weekly, with timing

PHOTOGRAPHIC DOCUMENTATION

013233-2

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each month adjusted to coincide with the cutoff date associated with each Application for Payment. Select vantage points, including aerial photographs to show status of construction and progress since last photographs were taken.

- G. Final Completion Construction Photographs: Take **ten (10)** color photographs after date of Substantial Completion for submission as Project Record Documents.

3.2 CONSTRUCTION VIDEO RECORDINGS (N/A)

END OF SECTION 013233

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**SECTION 013300
SUBMITTAL PROCEDURES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 01 Section "Photographic Documentation" for submitting construction photographs
 - 5. Division 01 Section "Closeout Procedures" for submitting warranties.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Engineer's and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. List those submittals required to maintain orderly progress of the Work and those required early

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- because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Engineer's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by City for Contractor's use.
 1. City will furnish Contractor one set of digital data drawing files of the Contract Drawings.
 - a. Engineer makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital Drawing Software Program: The Contract Drawings are available in AutoCad 2010 dwg format.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 10 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow ten (10) working days for review of each resubmittal.

PART 2 - PRODUCTS**2.1 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 1. Action Submittals: Submit four (4) paper copies of each submittal unless otherwise

SUBMITTAL PROCEDURES**013300-2**

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- indicated. Engineer will return three copies.
2. Informational Submittals: Submit four (4) paper copies of each submittal unless otherwise indicated. Engineer will return three copies.
- B. Shop Drawings: Prepare Project-specific information. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on City's digital data drawing files is otherwise permitted.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches.
 3. Submit Shop Drawings in the following format:
 - a. Four (4) copies of each submittal. Engineer will retain two copies; remainder will be returned.

PART 3 - EXECUTION**3.1 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. See requirements in Section 017700.
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, and date of Contractor's approval.

3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 1. Approved as submitted
 2. Approved as noted
 3. Revise and resubmit
 4. Rejected.
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will

SUBMITTAL PROCEDURES**013300-3**

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.

- D. Partial or incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

**SECTION 015000
TEMPORARY FACILITIES AND CONTROLS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities. Contractor to provide temporary trailer, secured per code, to contain permit drawings and as contractor's site office. This temporary facility to be air conditioned.
- B. Related Sections include the following:
 - 1. Division 01 Section "Summary" for limitations on utility interruptions and other work restrictions.
 - 2. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - 3. Divisions 02 through 16 Sections for temporary heat, ventilation, and humidity requirements for products in those Sections.
 - 4. Division 31 Section "Termite Control" for pest control.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, City's Representative, Architect, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Pay sewer service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Pay water service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Pay electric power service use charges for electricity used by all entities for construction operations.

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708****1.5 SUBMITTALS**

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.6 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.7 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before City's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Pavement: Comply with Division 32 pavement Sections.
- B. Chain-Link Fencing: Minimum 0.148-inch, thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch OD line posts and 2-7/8-inch OD corner and pull posts, with 1-5/8-inch OD top rails.
- C. Lumber and Plywood: Comply with requirements in Division 06 Section "Rough Carpentry."
- D. Paint: Comply with requirements in Division 09 painting Sections.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of construction personnel, including City's Representative. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 10 to 12 individuals. Provide electrical power service and 120-V ac duplex receptacles, with not less than 1 receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-square tack board.
 - 3. Drinking water and private toilet.

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4. Coffee machine and supplies.
 5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 76 deg F.
 6. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
 7. Dedicated telephone line for facsimile machine.
 8. Facsimile machine and all supplies, including maintenance and electrical service.
 9. Copy machine and all supplies, including maintenance and electrical service.
 10. Answering machine on Contractor's telephone line.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
1. Store combustible materials apart from building.
- D. The following additional facilities as required for completion of the work.
1. Construction signs.
 2. Contractor's and subcontractor's equipment.
 3. Temporary containers for construction waste materials.
 4. Temporary barricades, railings and fences.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless City authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 3. Permanent HVAC System: If City authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction.

PART 3 - EXECUTION**3.1 INSTALLATION, GENERAL**

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.

TEMPORARY FACILITIES AND CONTROLS

015000-3

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

1. Arrange with utility company, City, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 1. Connect temporary sewers to city system as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Water Service: Use of City's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to City. At Substantial Completion, restore these facilities to condition existing before initial use.
 1. Where installations below an outlet might be damaged by spillage or leakage, provide a drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.
- E. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- F. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 1. Install electric power service, unless otherwise indicated.
- I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- J. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install at least one telephone line for each field office.
 1. Provide additional telephone lines for the following:
 - a. Provide a dedicated telephone line for each facsimile machine and computer in each field office.

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

- b. Provide one telephone line for City's use.
- 2. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect.
 - e. Engineers.
 - f. City of Fort Lauderdale Construction Manager.
 - g. Principal subcontractors' field and home offices.
- 3. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.
- K. Electronic Communication Service: Provide temporary electronic communication service, including electronic mail, in common-use facilities.
 - 1. Provide DSL in primary field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
 - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to City.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Provide temporary parking areas for construction personnel.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
- E. Project Identification and Temporary Signs: Provide Project identification and other signs as indicated in contract documents. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
 - 1. Provide temporary, directional signs for construction personnel and visitors.
 - 2. Maintain and touchup signs so they are legible at all times.
- F. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal." Also comply with all LEED requirements.

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- G. **Waste Disposal Facilities:** Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements and LEED requirements.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. **Environmental Protection:** Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Division 01 Section "Summary" and all LEED requirements.
- B. **Temporary Erosion and Sedimentation Control:** Comply with requirements specified in Division 31 Section 311000 "Site Clearing."
- C. **Temporary Erosion and Sedimentation Control:** Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
1. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. **Stormwater Control:** Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. **Tree and Plant Protection:** Comply with requirements specified in Division 32 Section "Tree Protection and Trimming."
- F. **Tree and Plant Protection:** Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- G. **Pest Control:** Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for City. Perform control operations lawfully, using environmentally safe materials.
- H. **Site Enclosure Fence:** Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
1. **Extent of Fence:** As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 2. **Maintain security by limiting number of keys and restricting distribution to authorized personnel.** Provide City with one set of keys.

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- I. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- J. Barricades, Warning Signs, and Lights: Comply with requirements of Florida Building Code Chapter 33 for erecting structurally adequate barricades, including warning signs and lighting.
- K. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- L. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by City from fumes and noise.
 - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 - 2. Construct dustproof partitions with 2 layers of 3-mil polyethylene sheet on each side. Cover floor with 2 layers of 3-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
 - 3. Insulate partitions to provide noise protection to occupied areas.
 - 4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - 5. Protect air-handling equipment.
 - 6. Weather strip openings.
 - 7. Provide walk-off mats at each entrance through temporary partition.
- M. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 - 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708****3.5 OPERATION, TERMINATION, AND REMOVAL**

- A. **Supervision:** Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. **Maintenance:** Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. **Temporary Facility Changeover:** Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. **Termination and Removal:** Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. City reserves right to take possession of Project identification signs.
 - 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 - 3. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

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PROJECT 12708

SECTION 01590 – PROJECT SIGN

PART 1 GENERAL

Contractor, at contractor's expense, shall furnish and install a 4' x 8' sign (with white painted posts) prior to start of construction. A sample sign template is below but is not specific to the project. The exact style and design of the sign will be provided by the CITY to the Contractor during the preconstruction meeting in PDF format.



City of Fort Lauderdale

Keeping the Ocean in the Ocean

Bringing Drier Streets to Hendricks Isle

| | | | |
|--|---|---|---|
| <p>What's Happening? The City of Fort Lauderdale is combating poor roadway drainage resulting from seasonal high tides and major rain events.</p> <p>www.fortlauderdale.gov</p> | <p>Benefits 5,000 Neighbors</p> <ul style="list-style-type: none"> • Improved vehicular access during high tide and rain events • Better drainage of roadway • Enhanced neighborhood <p>Phone (954) 828-8000</p> | <p>Cost \$20,000</p> <p>Completion August 2013</p> <p>Contractor ABC Company</p> | <p>We're Working On:</p> <ul style="list-style-type: none"> • Installing interconnected underground catch basins • Cleaning existing drainage pipes, including the outfall pipes • Removing and replacing the concrete valley gutters that transport water to the catch basins • Installing drainage valves to help alleviate flooding from high tides |
|--|---|---|---|

Fort Lauderdale City Commission

| | | | | | |
|--------------------------------|--|--|---|--|---|
| John P. "Jack" Sailer Mayor | Bruce G. Roberts Vice Mayor, District I | Dean J. Trantalis Commissioner, District II | Bobby S. DuBose Commissioner, District III | Romney Rogers Commissioner, District IV | Lee R. Feldman, ICMA-CM City Manager |
|--------------------------------|--|--|---|--|---|

See Page 2, "Construction Sign Request Form", for information on the sign for this Project.

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

Construction Sign Request Form

FXE RUNWAY INCURSION MITIGATION

PROJECT 12520

Title (Not Bold):

What's Happening?

Installation of in-pavement and elevated LED Runway Guard Light (RGL) units, surface painted signage, and pavement markings at specific locations approaching the runways at Fort Lauderdale Executive Airport (FXE).

Benefits:

Improved longevity, reduced maintenance costs, and improved airfield visibility.

Number of Neighbors Benefitted:

N/A

Cost:

T.B.D

Month and Year of Expected Completion:

4/2021

Contractor:

T.B.D

Phone: 954-828-8000

We're Working On:

Runway guard light (RGL)
New pavement marking and signs.

Project Manager Signature

Date

Senior Project Manager Signature

Date

END OF SECTION

015900-2

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

**SECTION 017700
CLOSEOUT PROCEDURES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 01 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
 - 3. Division 01 Section "Execution Requirements" for progress cleaning of Project site.
 - 4. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 5. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 6. Division 01 Section "Demonstration and Training" for requirements for instructing City's personnel.
 - 7. Divisions 02 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

CLOSEOUT PROCEDURES

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C. As Built Project Record Survey

1. Upon completion of the work, after Substantial Completion and before Final Acceptance, the Contractor will supply to the Engineer a complete "as built" survey of the entire project site. The "as-built" project record survey shall be performed in conjunction with the paving operation, the Contractor will supply to the Engineer a complete "as built" survey of the centerline profile and corresponding cross-section grades at all 50 foot stations in the longitudinal direction. Provide survey points at all profile grade change locations as defined on the proposed profile. Provide survey points at all PC and PT locations as defined on the Geometry Plan. Provide as-built elevations in all additional locations where proposed elevations are given on the plans. All survey points, including horizontal and vertical control, property corners, section corners and references (hereinafter referred to as "survey points") shall be clearly marked and referenced prior to construction. These survey points must be sufficiently referenced so that they can be re-established after construction if they are disturbed.
2. This "as built" survey will be a complete topographic survey of the entire project site surrounded by the limit of construction plus 50-feet in all directions. If any work is done outside the limits of construction for any reason, this limit of survey will be increased to include this area plus 50-feet. This survey shall be certified by a Registered Land Surveyor as meeting the minimum Technical Standards for topographic surveys as set forth in chapter 5J-17, Florida Administrative Code. The survey data must be supplied as a signed and sealed drawing (24" x 36"), PDF file (24" x 36"), and "readable" AutoCAD file. All cogo points in the drawing file are to be Civil 3D point objects. All survey data shall also be supplied in ASCII format. ASCII format shall be comma delimited PNEZD with complete point descriptions. Each point or feature shown on the survey shall have a corresponding point or points in the ASCII file and the descriptions of the points in the ASCII file shall correspond to the call outs and descriptions of the point and features on the survey. The topographic survey shall describe the entire site at the same scale as the construction drawings and will be arranged on the required size sheets in a neat and logical manner. Larger scale details are to be provided to clarify any complicated or complex areas. The horizontal and vertical control and datum established and shown on the project plans shall be the basis of the survey. Work specified herein shall be considered incidental to the project scope and will not be paid as a separate item.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of **ten (10)** days prior to requesting inspection for determining date of Substantial Completion. List items

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below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of **ten (10)** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Division 01 Section "Demonstration and Training."
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of **ten (10)** days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Construction Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Construction Project Manager will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."

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2. **Certified List of Incomplete Items:** Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. **Certificate of Insurance:** Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Inspection:** Submit a written request for final inspection to determine acceptance a minimum of **ten (10)** days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Construction Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Construction Project Manager will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. **Re-inspection:** Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List:** Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, **starting with exterior areas first and proceeding from lowest floor to highest floor.**
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project number and name.
 - b. Date.
 - c. Name of Architect
 - d. Name of Contractor.
 - e. Page number.
 4. Retain and revise one of four subparagraphs below if default submittal format in Division 01 Section "Submittals Procedures" is not appropriate. Due to nature of punch list process, electronic worksheet software is often preferred file type. Submit list of incomplete items in the following format:
 - a. City of Fort Lauderdale Punch List Inspection Form
 - b. MS Excel electronic file. Construction Project Manager will return annotated file.
 - c. PDF electronic file. Construction Project Manager will return annotated file.
 - d. Three (3) paper copies. Construction Project Manager will return two (2) copies.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal:** Submit written warranties on request of Construction Project Manager for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy:** Submit properly executed warranties within fifteen (15) days of

CLOSEOUT PROCEDURES

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completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS (N/A)**PART 3 - EXECUTION (N/A)**

END OF SECTION 017700



Advancement
of Constructio
Technology

PUNCH LIST

Project: 12708

From (A/E): _____

Site Visit Date: _____

To (Contractor): _____

A/E Project Number: _____

Contract For: _____

The following items require the attention of the Contractor for completion or correction. This list may not be all-inclusive, and the failure to include any items on this list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

| Item Number | Room Number | Location (Area) | Description | Correction/Completion Date | Verification A/E Check |
|----------------|----------------|--------------------|-------------|-------------------------------|---------------------------|
|----------------|----------------|--------------------|-------------|-------------------------------|---------------------------|

☐ Attachments

Signed by: _____

Date: _____

Copies: ☐ Owner ☐ Consultants ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐ File



CITY OF FORT LAUDERDALE

Public Works Department-Engineering
Final Inspection Punch-List Corrective Action Form

P12708

Project Number: _____ Project Name: _____ Inspection Date: _____
Contractor: _____ Project Manager: _____ Inspector: _____

| Item No. | Description of Deficiency | Date Completed | | Comments |
|----------|---------------------------|----------------|-------|----------|
| | | Contractor | PM/CI | |
| | | | | |
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Instructions for completing the *Final Inspection Punch-list Corrective Action Form*.

The Construction Project Manager, in conjunction with the assigned construction inspector is responsible for preparing this form. It shall be completed in cooperation with the project's prime contractor and will be used as the official record for any and all punch-list items. Under no circumstances shall final payment be made until all items identified on this form are corrected to the satisfaction of the Construction Project Manager.

1. Prior to scheduling Substantial Completion/Final Inspection, all permits should be cleared by the building department, all O&M Manuals should be turned over to the city, and all warranty information should be provided in a three ring binder and on CD-ROM.
2. Schedule inspection, coordinating with necessary staff to properly evaluate the completeness of the project.
3. The Final Inspection Punch-list Corrective Action Form is to be used to document discrepancies that are minor in nature (i.e., paint chips, minor blemishes, etc....) if major items of work are not complete, lack required quality, or are not acceptable for any reason, the final inspection should be rescheduled for a time when these items have been completed.
4. Fill in the form completely: Project Number and Name, Date of inspection, the contractor's name, PM and inspector's names should all be filled in.
5. Beginning with item number 1, list the description of the deficiency, and any amplifying information required to fully document the item to be corrected. For instance, Item No. 1; Description of Deficiency - Door entering main office sticks; Notes – Door should be adjusted to open and close properly.
6. Use as many forms as required to fully document the inspection results. In the lower right hand side of the form indicate page number and total number of forms used (for example 1 of 4)
7. If there is any disagreement as to whether or not an item is a deficiency, it should be documented and then
8. When an item is corrected, the Contractor shall initial the form and indicate the date work was completed. If the PM/CI concurs with the acceptance of the work, they will initial and date in the corresponding block.
9. Substantial completion will not be issued if there is a large number of punch list items or if there are major deficiencies with the work. If you have any questions regarding whether or not an item is major, or if there are a large number deficiencies, contact the Senior Project Manager.
10. Under no circumstances will final payment be made without documented completion of the Punch-List.
11. This is a four part carbonless form: white copy – project file (scanned copy to unifier project file), yellow copy – to superintendent or CQC representative, pink – copy to contractor home office, orange copy – Construction Inspector

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS
Fort Lauderdale Executive Airport

RW 9 Run-Up Area and Taxiway Intersection Improvements Project

City Project No. 12708
FAA AIP No. 3-12-0024-34-2022
FDOT Fin Proj No. 448327-1-94-01



Bid Set Submittal

May 4, 2022

Prepared For:

City of Fort Lauderdale

Prepared By:

Kimley-Horn and Associates, Inc.

8201 Peters Rd - Suite 2200 – Plantation, Florida – 33324

Quantum Electrical Engineering, Inc.

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Kimley-Horn and Associates, Inc.

Quantum Electrical Engineering, Inc.

Thomas F. O'Donnell, P.E.
FL P.E. No. 62478
© Kimley-Horn and Associates, Inc., 2022

Amy L. Champagne-Baker, P.E.
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**RW 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS**

CITY PROJECT NO. 12708

TECHNICAL SPECIFICATIONS OUTLINE

| | | <u>Page Numbers</u> |
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| Section 10 | Definition of Terms | GP-10-1 to GP-10-8 |
| Section 20 | Proposal Requirements and Conditions | GP-20-1 to GP-20-4 |
| Section 30 | Award and Execution of Contract | GP-30-1 to GP-30-2 |
| Section 40 | Scope of Work | GP-40-1 to GP-40-4 |
| Section 50 | Control of Work | GP-50-1 to GP-50-8 |
| Section 60 | Control of Materials | GP-60-1 to GP-60-4 |
| Section 70 | Legal Regulations and Responsibility to Public | GP-70-1 to GP-70-10 |
| Section 80 | Execution and Progress | GP-80-1 to GP-80-6 |
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| GENERAL CONSTRUCTION ITEMS | | |
| C-100 | Contractor Quality Control Program (CQCP) | C-100-1 to C-100-8 |
| C-102 | Temporary Air and Water Pollution, Soil Erosion, and Siltation Control | C-102-1 to C-102-6 |
| C-105 | Mobilization | C-105-1 to C-105-2 |
| C-110 | Method of Estimating Percentage of Material within Specified Limits (PWL) | C-110-1 to C-110-8 |
| S-102 | Airport Safety and Maintenance of Air Operations Area Traffic Requirements | S-102-1 to S-102-14 |
| S-103 | Project Survey and Stakeout | S-103-1 to S-103-4 |
| S-205 | Service Road | S-205-1 to S-205-2 |
| CIVIL ENGINEERING | | |
| P-101 | Preparation/Removal of Existing Pavements | P-101-1 to P-101-8 |
| P-151 | Clearing and Grubbing | P-151-1 to P-151-4 |
| P-152 | Excavation, Subgrade, and Embankment | P-152-1 to P-152-10 |
| P-153 | Controlled Low-Strength Material (CLSM) | P-153-1 to P-153-4 |
| P-154 | Subbase Course | P-154-1 to P-154-6 |
| P-211 | Lime Rock Base Course | P-211-1 to P-211-6 |
| P-401 | Asphalt Mix Pavement | P-401-1 to P-401-24 |
| P-403 | Asphalt Mix Pavement | P-403-1 to P-403-20 |
| P-602 | Emulsified Asphalt Prime Coat | P-602-1 to P-602-4 |
| P-603 | Emulsified Asphalt Tack Coat | P-603-1 to P-603-4 |
| P-605 | Joint Sealants for Pavements | P-605-1 to P-605-8 |
| P-606 | Adhesive Compounds, Two-Component for Sealing Wire and Lights in Pavement | P-606-1 to P-606-4 |
| P-610 | Concrete for Miscellaneous Structures | P-610-1 to P-610-8 |
| P-620 | Runway and Taxiway Marking | P-620-1 to P-620-8 |
| T-904 | Sodding | T-904-1 to T-904-4 |
| T-905 | Topsoil | T-905-1 to T-905-4 |
| S-906 | Hydroseed | S-906-1 to S-906-8 |

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LIGHTING AND SIGNAGEPage Numbers

| | | |
|-------|---|---------------------|
| L-108 | Underground Power Cables for Airports | L-108-1 to L-108-16 |
| L-110 | Airport Underground Electrical Duct Banks and Conduits | L-110-1 to L-110-8 |
| L-115 | Electrical Manholes and Junction Structures | L-115-1 to L-115-8 |
| L-125 | Installation of Airport Lighting Systems | L-125-1 to L-125-8 |

NOTE:

Specification numbers that contain the prefix "S" are prepared by the Engineer and are not Standard Federal Aviation Administration Specifications.

**RW 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS**

CITY PROJECT NO. 12708

SECTION 10 DEFINITION OF TERMS

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

| Paragraph Number | Term | Definition |
|-------------------------|--|---|
| 10-01 | AASHTO | The American Association of State Highway and Transportation Officials. |
| 10-02 | Access Road | The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway. |
| 10-03 | Advertisement | A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished. |
| 10-04 | Airport | Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport. |
| 10-05 | Airport Improvement Program (AIP) | A grant-in-aid program, administered by the Federal Aviation Administration (FAA). |
| 10-06 | Air Operations Area (AOA) | The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron. |
| 10-07 | Apron | Area where aircraft are parked, unloaded or loaded, fueled and/or serviced. |
| 10-08 | ASTM International (ASTM) | Formerly known as the American Society for Testing and Materials (ASTM). |
| 10-09 | Award | The Owner's notice to the successful bidder of the acceptance of the submitted bid. |

**RW 9 RUN-UP AREA AND
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| Paragraph Number | Term | Definition |
|-------------------------|--|--|
| 10-10 | Bidder | Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated. |
| 10-11 | Building Area | An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon. |
| 10-12 | Calendar Day | Every day shown on the calendar. |
| 10-13 | Certificate of Analysis (COA) | The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications. |
| 10-14 | Certificate of Compliance (COC) | The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative. |
| 10-15 | Change Order | A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project. |
| 10-16 | Contract | <p>A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.</p> <p>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.</p> |
| 10-17 | Contract Item (Pay Item) | A specific unit of work for which a price is provided in the contract. |
| 10-18 | Contract Time | The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date. |
| 10-19 | Contractor | The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining |

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| Paragraph Number | Term | Definition |
|-------------------------|--|---|
| | | to the work who acts directly or through lawful agents or employees to complete the contract work. |
| 10-20 | Contractors Quality Control (QC) Facilities | The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP). |
| 10-21 | Contractor Quality Control Program (CQCP) | Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. |
| 10-22 | Control Strip | A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification. |
| 10-23 | Construction Safety and Phasing Plan (CSPP) | The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications. |
| 10-24 | Drainage System | The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area. |
| 10-25 | Engineer | The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative. |
| 10-26 | Equipment | All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work. |
| 10-27 | Extra Work | An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified. |
| 10-28 | FAA | The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative. |
| 10-29 | Federal Specifications | The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration. |

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| Paragraph Number | Term | Definition |
|------------------|--|---|
| 10-30 | Force Account | <p>a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p>b. Owner Force Account - Work performed for the project by the Owner's employees.</p> |
| 10-31 | Intention of Terms | <p>Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner.</p> <p>Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.</p> |
| 10-32 | Lighting | A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface. |
| 10-33 | Major and Minor Contract Items | A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items. |
| 10-34 | Materials | Any substance specified for use in the construction of the contract work. |
| 10-35 | Modification of Standards (MOS) | Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1. |
| 10-36 | Notice to Proceed (NTP) | A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins. |
| 10-37 | Owner | The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean |

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TW INTERSECTION IMPROVEMENTS**

CITY PROJECT NO. 12708

| Paragraph Number | Term | Definition |
|-------------------------|---|---|
| | | airport Sponsor only. The Owner for this project is City of Fort Lauderdale |
| 10-38 | Passenger Facility Charge (PFC) | Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls. |
| 10-39 | Pavement Structure | The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit. |
| 10-40 | Payment bond | The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work. |
| 10-41 | Performance bond | The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract. |
| 10-42 | Plans | The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.' |
| 10-43 | Project | The agreed scope of work for accomplishing specific airport development with respect to a particular airport. |
| 10-44 | Proposal | The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications. |
| 10-45 | Proposal guaranty | The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner. |
| 10-46 | Quality Assurance (QA) | Owner's responsibility to assure that construction work completed complies with specifications for payment. |
| 10-47 | Quality Control (QC) | Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications. |
| 10-48 | Quality Assurance (QA) Inspector | An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being |

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| Paragraph Number | Term | Definition |
|-------------------------|---|--|
| | | performed, or of the materials furnished or being furnished by the Contractor. |
| 10-49 | Quality Assurance (QA) Laboratory | The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory. |
| 10-50 | Resident Project Representative (RPR) | The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative. |
| 10-51 | Runway | The area on the airport prepared for the landing and takeoff of aircraft. |
| 10-52 | Runway Safety Area (RSA) | A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA. |
| 10-53 | Safety Plan Compliance Document (SPCD) | Details how the Contractor will comply with the CSPP. |
| 10-54 | Specifications | A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically. |
| 10-55 | Sponsor | A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport. |
| 10-56 | Structures | Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein. |
| 10-57 | Subgrade | The soil that forms the pavement foundation. |
| 10-58 | Superintendent | The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction. |

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| Paragraph Number | Term | Definition |
|------------------|---|--|
| 10-59 | Supplemental Agreement | A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item. |
| 10-60 | Surety | The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor. |
| 10-61 | Taxilane | A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas. |
| 10-62 | Taxiway | The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas. |
| 10-63 | Taxiway/Taxilane Safety Area (TSA) | A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA. |
| 10-64 | Work | The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications. |
| 10-65 | Working day | A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days. |
| 10-66 | Owner Defined terms | <p><i>Owner's Authorized Representative (OAR) – A person under contract with LCPA and authorized by LCPA to inspect, reject or accept work performed by the General Contractor. OAR and Resident Project Representative (RPR) are used interchangeably.</i></p> <p><i>Advisory Circular (AC) - A document issued by the FAA containing informational material and guidance. When referred to in the drawings (plans) and</i></p> |

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| Paragraph Number | Term | Definition |
|---------------------|------|--|
| | | <p>specifications, advisory circulars shall have the same force as supplemental specifications.</p> <p>Certification - When "certification" is used to describe that which is to be submitted for approval from the Contractor, jointly with a supplier or by himself for his own materials, whether manufactured or purchased by the Contractor, will be construed to mean compliance in individual or completed form with the drawings (plans), specifications and/or intent of the design.</p> <p>Awarded Contract - The written agreement between the Owner and Contractor, covering the work to be performed. The awarded Contract shall include, but is not limited to: The Advertisement; The Contract Form; The Proposal; The Performance Bond and Payment Bond; any required insurance certificates; The General Provisions; The General Requirements, The Special Provisions; The Specifications; Standard Forms; The Drawings (Plans), any addenda issued to bidders, Change Orders, Terms and Conditions, and agreements which are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.</p> <p>Special Provisions - The specific clauses setting forth conditions or requirements peculiar to the project under consideration.</p> <p>Subcontractor - The pre-qualified (where required) individual, partnership or corporation, or a combination thereof, undertaking the execution of a part of the work under the terms of the Contract, by virtue of an agreement with the contractor approved by the Owner.</p> |

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SECTION 20 PROPOSAL REQUIREMENTS AND CONDITIONS**20-01 Advertisement (Notice to Bidders).**

a. General. Bids will be asked for in an advertisement for bids as set forth by State laws and as required by Part 152 of the Federal Aviation Regulations. The advertisement will contain a description of the Project; the place, date, and hour of opening; approximate estimates of the various quantities and kinds of work to be performed or materials to be furnished; a stipulation as to the character and amount of the Proposal Bid; and instructions to Bidders as to the access to plans and specifications. The advertisement for bids will become part of the Contract if award is made.

b. Quantities. The quantities shown in the advertisement for bids are to be considered as approximate only and may be amended to include additional quantities or additional items, or may be amended to decrease quantities or exclude items of work before bids are to be received.

c. Corrections. Corrections and minor changes in the advertisement for bids, and Proposal form may be put into effect at any time prior to the hour fixed for opening of bids by telegram, certified or registered letter from the Engineer, notifying all prospective Bidders to whom Proposal forms have been previously issued.

d. Owner's Rights. The Owner reserves the right to reject any and all bids.

20-02 Qualification of bidders. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division (**FDOT**) prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-02.1 SUBCONTRACTORS AND SUPPLIERS. *The contractor shall not employ any subcontractor or supplier or other person or organization whether initially or as a substitute, against whom the Owner or Engineer may have reasonable objection.*

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Contractor shall not be required to employ any subcontractor, supplier or other person or organization to furnish or perform any of the work against whom the Contractor has reasonable objection.

If contractor has submitted a list of proposed subcontractors and suppliers as required in Section 20-02 and Owner or Engineer has reasonable objection after due investigation to any such subcontractor or supplier, contractor shall submit an acceptable substitute without adjustment of the Contract price.

20-03 Contents of proposal forms. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

A prebid conference is required on this project to discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. Time, date, and place of the prebid meeting is posted on www.flypgd.com.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.
- c. Documented record of Contractor default under previous contracts with the Owner.
- d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. ***The Contractor shall verify all quantities as noted in the plans prior to ordering material or equipment. No additional compensation shall be made for stored materials, re-stocking fees or other fees associated with errors in quantity calculations.*** It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms.

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Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.
- f. If the applicable Disadvantaged Business Enterprise information is incomplete.

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The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms*, of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than **10 working days** prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

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SECTION 30 AWARD AND EXECUTION OF CONTRACT

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.
- b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within 90 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

Unless otherwise specified in this subsection, no award shall be made until the FAA has concurred in the Owner's recommendation to make such award and has approved the Owner's proposed contract to the extent that such concurrence and approval are required by 49 CFR Part 18.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals*. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds*.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all

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legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds*, of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract*, of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

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SECTION 40 SCOPE OF WORK

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

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When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so

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encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

- a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,
- b. Remove such material from the site, upon written approval of the RPR; or
- c. Use such material for the Contractor's own temporary construction on site; or,
- d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

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SECTION 50 CONTROL OF WORK

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans,

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cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions. *Special Provisions and Contract Forms are provided in the Project Manual.*

50-05 Cooperation of Contractor. The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

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Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): ***AutoCAD 2018 or higher and two hard copy plans 24x36 signed and sealed by a licensed land surveyor. This delivery of survey is required to receive payment for Survey and Stakeout Pay Item.***

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

Construction Staking and Layout includes but is not limited to:

- a. Clearing and Grubbing perimeter staking***
- b. Rough Grade slope stakes at 100-foot (30-m) stations***
- c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations***

Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

- a. Runway – minimum five (5) per station***
- b. Taxiways – minimum three (3) per station***
- c. Holding apron areas – minimum three (3) per station***
- d. Roadways – minimum three (3) per station***

Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

- a. Runway – minimum five (5) per station***
- b. Taxiways – minimum three (3) per station***
- c. Holding apron areas – minimum three (3) per station***

Pavement areas:

a. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.

b. Between Lifts at 25-foot (7.5-m) stations for the following section locations:

- (1) Runways – each paving lane width***
- (2) Taxiways – each paving lane width***
- (3) Holding areas – each paving lane width***

c. After finish paving operations at 50-foot (15-m) stations:

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(1) All paved areas – Edge of each paving lane prior to next paving lot

d. Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.

e. Fence lines at 100-foot (30-m) stations minimum.

f. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.

g. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.

h. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).

i. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).

The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the RPR without additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

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Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

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50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor (*punch list items*) and the Contractor shall correct the unsatisfactory work. ***The punch list items shall be corrected by the Contractor within 30 calendar days and prior to any request for final inspection or acceptance.*** Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

~~50-17 Value Engineering Cost Proposal.~~

~~The provisions of this paragraph will apply only to contracts awarded to the lowest bidder pursuant to competitive bidding.~~

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~~On projects with original contract amounts in excess of \$100,000, the Contractor may submit to the RPR, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the cost of construction. The value engineering cost proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, design and safety standards. This provision shall not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a value engineering proposal.~~

~~Not eligible for value engineering cost proposals are changes in the basic design of a pavement type, runway and taxiway lighting, visual aids, hydraulic capacity of drainage facilities, or changes in grade or alignment that reduce the geometric standards of the project.~~

~~As a minimum, the following information shall be submitted by the Contractor with each proposal:~~

- ~~a. A description of both existing contract requirements for performing the work and the proposed changes, with a discussion of the comparative advantages and disadvantages of each.~~
- ~~b. An itemization of the contract requirements that must be changed if the proposal is adopted.~~
- ~~c. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes.~~
- ~~d. A statement of the time by which a change order adopting the proposal must be issued.~~
- ~~e. A statement of the effect adoption of the proposal will have on the time for completion of the contract.~~
- ~~f. The contract items of work affected by the proposed changes, including any quantity variation attributable to them.~~

~~The Contractor may withdraw, in whole or in part, any value engineering cost proposal not accepted by the RPR, within the period specified in the proposal. The provisions of this subsection shall not be construed to require the RPR to consider any value engineering cost proposal that may be submitted.~~

~~The Contractor shall continue to perform the work in accordance with the requirements of the contract until a change order incorporating the value engineering cost proposal has been issued. If a change order has not been issued by the date upon which the Contractor's value engineering cost proposal specifies that a decision should be made, or such other date as the Contractor may subsequently have requested in writing, such value engineering cost proposal shall be deemed rejected.~~

~~The RPR shall be the sole judge of the acceptability of a value engineering cost proposal and of the estimated net savings from the adoption of all or any part of such proposal. In determining the estimated net savings, the RPR may disregard the contract bid prices if, in the RPR's judgment such prices do not represent a fair measure of the value of the work to be performed or deleted.~~

~~The Owner may require the Contractor to share in the Owner's costs of investigating a value engineering cost proposal submitted by the Contractor as a condition of considering such proposal. Where such a condition is imposed, the Contractor shall acknowledge acceptance of it in writing. Such acceptance shall constitute full authority for the Owner to deduct the cost of investigating a value engineering cost proposal from amounts payable to the Contractor under the contract.~~

~~If the Contractor's value engineering cost proposal is accepted in whole or in part, such acceptance will be by a contract change order that shall specifically state that it is executed~~

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~~pursuant to this paragraph. Such change order shall incorporate the changes in the plans and specifications which are necessary to permit the value engineering cost proposal or such part of it as has been accepted and shall include any conditions upon which the RPR's approval is based. The change order shall also set forth the estimated net savings attributable to the value engineering cost proposal. The net savings shall be determined as the difference in costs between the original contract costs for the involved work items and the costs occurring as a result of the proposed change. The change order shall also establish the net savings agreed upon and shall provide for adjustment in the contract price that will divide the net savings equally between the Contractor and the Owner.~~

~~The Contractor's 50% share of the net savings shall constitute full compensation to the Contractor for the value engineering cost proposal and the performance of the work.~~

~~Acceptance of the value engineering cost proposal and performance of the work shall not extend the time of completion of the contract unless specifically provided for in the contract change order.~~

50-18 RETEST OF WORK. *When as provided for in the Contract documents, the Owner performs sampling tests of the work and the tests show a failure to meet the requirements of the Contract documents, the expense of retesting, after reworking or substitution by the Contractor will be at the expense of the Contractor and such costs will be deducted from the payments otherwise due to the Contractor.*

50-19 CORRECTION OF WORK AFTER FINAL PAYMENT. *Neither the final certificate, nor payment, nor any provision in the Contract documents shall relieve the Contractor of responsibility for faulty materials or workmanship and, unless otherwise specified, he shall remedy any defect due thereto and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from date of final acceptance.*

The Owner shall give notice of observed defects with reasonable promptness. Wherever the word "acceptance" occurs, it shall be understood to mean final acceptance.

50-20 WARRANTY AND GUARANTEE. *The Contractor warrants to the Owner that all materials furnished under this Contract shall be new unless otherwise specified and that all Work, including without limitation all materials, will be of good quality, free from faults and defects and in conformance with contract requirements. Any work not so conforming to these standards may be considered defective.*

If, within one year after the date of final acceptance of the Work, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract, any of the Work is found to be defective or not in accordance with Contract requirements, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so.

The obligations of the Contractor in this paragraph entitled WARRANTY AND GUARANTEE shall be in addition to and not in limitation of any obligations imposed upon him by special guarantees required by the contract or otherwise prescribed by law.

END OF SECTION 50

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SECTION 60 CONTROL OF MATERIALS

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

Contractor shall supply steel and manufactured products that conform to the Buy American provisions established under 49 USC Section 50101 as follows: "Steel products must be 100% U.S. domestic product. Preference shall be given to products that are 100% manufactured and assembled in the U.S. Manufactured products not meeting the 100% U.S. domestic preference may only be used on the project if the FAA has officially granted a permissible waiver to Buy American Preferences. Submittals for all manufactured products must include certification of compliance with Buy American requirements as established under 49 USC Section 50101. Submittal must include sufficient information to confirm compliance or submittal will be returned with no action."

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR. ***In the event that any tests show a failure to meet the requirements of the Contract Documents, the expense of retesting, after substitution or modification, shall be paid by the Contractor.***

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The Contractor shall furnish the required samples without charge and shall give sufficient notification of the placing of orders for materials to permit testing.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP). ***The final quality control report, signed and sealed by an engineer registered in Florida, shall be delivered in hard copy.***

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results. ***Certification alone will not relieve the Contractor from his responsibility to provide materials that comply fully with the provisions of these specifications and that acceptable to the Engineer.***

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

- a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

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b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

~~**60-05 Engineer/ Resident Project Representative (RPR) field office.** The Contractor shall provide dedicated space for the use of the engineer, RPR, and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity and other amenities as described in Item M-106.~~

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in

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making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

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SECTION 70 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) ***is indicated on the project plans or described in the contract documents.*** ~~must be shown on the plans and is indicated as follows: []~~.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval

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of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

~~**70-08 Construction Safety and Phasing Plan (CSPP).** The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is made part of Contract under Technical Specification S-102 Airport Safety and Maintenance of Air Operations Area Traffic Requirements, on sheet(s) [] of the project plans.~~

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

Work that is to remain in place which is damaged or defaced by reasons of work performed under this Contract, shall be restored at no additional cost to the Owner.

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Items removed, indicated to be salvaged for Owner or reused in new work, which are damaged beyond repair, shall be replaced with equal new materials under this Contract at no additional cost to the Owner.

Existing pavement or other existing work not specified for removal which is temporarily removed, damaged or in any way disturbed or altered by work under this Contract shall be repaired, patched, or replaced to the complete satisfaction of the RPR at no additional cost to the Owner.

Where it is necessary to cut, alter, remove, or temporarily remove and replace existing property or equipment, the cost shall be included in the Contract price for the item creating such work.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

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The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations **and utility owners** have been indicated on the plans **and/or in the contract documents**. ~~and the Owners are indicated as follows:~~

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

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In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-15.1 FAA facilities and cable runs. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

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Any displaced or relocated FAA facility or cables due to construction will require a signed and executed reimbursable agreement between the Owner and the FAA Tech Ops Division.

The splicing of cables is not be an acceptable form of repair for certain projects. If any FAA cables are damaged, the Contractor shall replace the cables in their entirety.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

In the event of conflict between Federal, State or local laws, codes, ordinances, rules and regulations concerning pollution control, the most restrictive applicable ones shall apply.

The Contractor shall pay special attention to the pollution control requirements of the several specifications. Work items, which may cause excessive pollution and shall be closely controlled by the Contractor, are:

- a) Clearing, grubbing, burning or other disposal.***
- b) Stripping, excavation, and embankment.***
- c) Drainage and ditching.***
- d) Aggregate production, handling and placing.***
- e) Cement, lime or other stabilization.***

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- f) Concrete and bituminous materials handling, production and paving.**
- g) Seeding, fertilizing, mulching and use of herbicides or insecticides.**
- h) Contractor's own housekeeping items; haul roads; sanitary facilities; water supply; equipment fueling, servicing and cleaning; job clean up and disposal.**

When the Contractor submits his tentative progress schedule in accordance with PROSECUTION and PROGRESS, Section 80, he shall also submit for acceptance of the Owner, his schedules for accomplishment of temporary and permanent erosion control work, as are applicable for clearing, grading, structures at water courses, construction, and paving, and his proposed methods of erosion control on haul roads and borrow pits and his plan for disposal of waste materials. No work shall be started until the erosion control schedules and methods of operations have been accepted by the Owner.

All bituminous and portland cement concrete proportioning plants shall meet state requirements.

The following listed stipulations shall apply to this Contract unless more restrictive ones are specified by the plans, special provisions, laws, codes, ordinances, etc. Cost of pollution control shall be incidental to the appropriate work items unless otherwise specified.

1. Control of Water Pollution and Siltation.

(a) All work of water pollution and siltation control is subject to inspection by the local and/or state governmental enforcing agent.

(b) All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the Contract.

(c) Construction operations shall be conducted in such manner as to reduce erosion to the practicable minimum and to prevent damaging siltation of water courses, streams, lakes or reservoirs. The surface area of erodible land, either on or off the airport site, exposed to the elements by clearing, grubbing or grading operations, including gravel pits, waste or disposal areas and haul roads, at any one time, for this Contract, shall be subject to approval of the Owner and the duration of such exposure prior to final trimming and finishing of the areas shall be held to the minimum practical. The Owner shall have full authority to order the suspension of grading and other operations pending adequate and proper performance of finishing and maintenance work or to restrict the trimming of erodible land exposed to the elements.

(d) Materials used for permanent erosion control measures shall meet the requirements of the applicable specifications. Gravel or stone, consisting of durable particles of rock and containing only negligible quantities of fines, shall be used for construction pads, haul roads and temporary roads in or across streams.

(e) Where called for on the plans, a stilling basin shall be constructed to prevent siltation in the stream from construction operations.

(f) The disturbance of lands and waters that are outside the limits of construction as staked is prohibited, except as found necessary and approved by the Owner.

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(g) The Contractor shall conduct his work in such manner as to prevent the entry of fuels, oils, bituminous materials, chemicals, sewage or other harmful materials into streams, rivers, lakes or reservoirs.

(h) Water from aggregate washing or other operations containing sediment shall be treated by filtration, by use of a settling basin or other means to reduce the sediment content to a level acceptable to the local and/or state governmental enforcing agent.

(i) All waterways shall be cleared as soon as practicable of falsework, piling, debris or other obstructions placed during construction operations and not a part of the finished work. Care shall be taken during construction and removal of such barriers to minimize the muddying of a stream.

(j) The Contractor shall care for the temporary erosion and siltation control measures during the period that the temporary measures are required and for the permanent erosion control measures until the Contract has been completed and accepted. Such care shall consist of the repair of areas damaged by erosion, wind, fire or other causes.

(k) Permanent and temporary erosion control work that is damaged due to the Contractor's operations or where the work required is attributed to the Contractor's negligence, carelessness, or failure to install permanent controls at the proper time, shall be repaired at the Contractor's expense.

2. Control of Other Air Pollutants.

(a) Grading areas shall be kept at proper moisture conditions.

(b) Sand or dust blows shall be temporarily mulched, with or without seeding, or otherwise controlled with stabilizing agents.

(c) Temporary roads, haul roads, traffic or work areas shall be stabilized with dust palliative, penetration asphalt, or wood chips or other approved measures to prevent dust pollution.

(d) Cements, fertilizers, chemicals, volatiles, etc., shall be stored in proper containers or with proper coverings to prevent accidental discharge into the air.

(e) Aggregate bins, cement bins, and dry material batch trucks shall be properly covered to prevent loss of material to the air.

(f) Drilling, grinding and sand blasting apparatus shall be equipped with water, chemical, or vacuum dust controlling systems.

(g) Applications of chemicals and bitumens shall be held to recommended rates.

(h) Bituminous mixing plants shall be equipped with dust collectors as noted in the specifications.

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(i) Quarrying, batching, and mixing operations and the transfer of materials between trucks, bins, or stockpiles shall be properly controlled to minimize dust diffusion.

(j) When necessary, certain operations shall be delayed until proper wind or climatic conditions exist to dissipate or inhibit potential pollutants to the satisfaction of the Owner.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work*, and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

70-21 Insurance Requirements. *Refer to the Project Manual for insurance requirements.*

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SECTION 80 EXECUTION AND PROGRESS

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least 35 percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within 14 days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

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The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a ~~weekly~~ ~~monthly~~ basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 Limitation of operations. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as ***indicated on the plans*** as follows:

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

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80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit

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with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar days shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1 Contract time based on calendar days. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

~~The maximum construction time allowed for Schedules [] the entire project will be the sum of the time allowed for individual schedules but not more than [] days the total contract time specified in the contract documents.~~ Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract. ***Liquidated damages will be assessed as provided in the contract.***

80-09 Default and termination of contract. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

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- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

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Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

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SECTION 90 MEASUREMENT AND PAYMENT

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

| Term | Description |
|---|---|
| Excavation and Embankment Volume | In computing volumes of excavation, the average end area method will be used unless otherwise specified. |
| Measurement and Proportion by Weight | The term "ton" will mean the short ton consisting of 2,000 pounds (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark. |

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| Term | Description |
|------------------------------|--|
| Measurement by Volume | Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery. |
| Asphalt Material | Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities. |
| Cement | Cement will be measured by the ton (kg) or hundredweight (km). |
| Structure | Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions. |
| Timber | Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece. |
| Plates and Sheets | The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch. |
| Miscellaneous Items | When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted. |
| Scales | <p>Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.</p> <p>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p> <p>In the event inspection reveals the scales have been "overweighing" (indicating more than correct weight) they will be immediately adjusted. All materials</p> |

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| Term | Description |
|-------------------------|--|
| | <p>received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</p> <p>In the event inspection reveals the scales have been under-weighting (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</p> <p>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> <p>Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.</p> <p>All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.</p> |
| Rental Equipment | <p>Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 <i>Payment for Extra Work</i>.</p> |
| Pay Quantities | <p>When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.</p> |

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities*, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

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90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-03. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work

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remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.
- b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor

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may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to

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Owner real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

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ITEM C-100 CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

100-1 General. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

- a. Provide qualified personnel to develop and implement the CQCP.
- b. Provide for the production of acceptable quality materials.
- c. Provide sufficient information to assure that the specification requirements can be met.
- d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR ~~or Contractor~~ as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

- a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.
- b. Discussion of the QA program.
- c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.
- d. Establish regular meetings to discuss control of materials, methods and testing.
- e. Establishment of the overall QC culture.

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a. General description. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. Contractor Quality Control Program (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least **14** calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-3 CQCP organization. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational

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chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time *on-site* employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.

(2) Engineer-in-training with two (2) years of airport paving experience.

(3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience *or Florida Department of Transportation equivalent certification.*

(4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC technicians. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

(1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.

(2) Performance of all QC tests as required by the technical specifications and paragraph 100-8.

(3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

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100-4 Project progress schedule. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

100-5 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal
- e. Scheduled date of submittal

100-6 Inspection requirements. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

100-7 Contractor QC testing facility.

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:

- 8.1.3 Equipment Calibration and Checks;
- 8.1.9 Equipment Calibration, Standardization, and Check Records;
- 8.1.12 Test Methods and Procedures

b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, *Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation*:

- 7 Test Methods and Procedures

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- 8 Facilities, Equipment, and Supplemental Procedures

100-8 QC testing plan. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (e.g., P-401)
- b. Item description (e.g., Hot Mix Asphalt Pavements)
- c. Test type (e.g., gradation, grade, asphalt content)
- d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)
- e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)
- f. Responsibility (e.g., plant technician)
- g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 Documentation. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

- (1) Technical specification item number and description
- (2) Compliance with approved submittals
- (3) Proper storage of materials and equipment
- (4) Proper operation of all equipment
- (5) Adherence to plans and technical specifications

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- (6) Summary of any necessary corrective actions
- (7) Safety inspection.
- (8) ***Photographs and/or video***

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location
- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 Corrective action requirements. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 Inspection and/or observations by the RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

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100-12 Noncompliance.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

(1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or

(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement and payment. Contractor Quality Control Program (CQCP) is for the personnel, tests, facilities and documentation required to implement the CQCP. The CQCP will be paid as a lump sum with the following schedule of partial payments:

- a. With first pay request, 25% with approval of CQCP and completion of the Quality Control (QC)/Quality Assurance (QA) workshop.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 20%.
- d. When 75% or more of the original contract is earned, an additional 20%
- e. After final inspection and acceptance of project, the final 10%.

BASIS OF PAYMENT**100-14 Payment will be made under:**

Item C-100-14.1 Contractor Quality Control Program (CQCP) – per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

| | |
|------------|--|
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials |

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**ITEM C-102 TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND
SILTATION CONTROL****DESCRIPTION**

102-1.1 This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, *Operational Safety on Airports During Construction*. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

This item also includes those items required by permit conditions.

102-1.2 Environmental Permits

- a. Responsibilities of the Contractor. In compliance with General Provision Section 70 paragraphs 70-01, 70-04, and 70-20, the Contractor shall prepare all required documentation, pay all fees, and perform all services and work necessary to obtain all permits and approvals from local, state, and federal regulatory agencies for Contractor's Work, staging, stockpile, blending and batch plant areas and operations. In compliance with the National Pollutant Discharge Elimination System (NPDES) permit issued or approved by the U.S. Environmental Protection Agency (EPA) pursuant to 40 CFR Part 122.6, the contractor shall prepare a project erosion control plan for these areas.***
- b. Contractor's Storm Water Pollution Prevention Plan (SWPPP). The Contractor's Pollution SWPPP will address all measures to dispose of, control, or prevent the discharge of solid, hazardous and sanitary wastes to the waters of the U.S. The plan shall include procedures to control offsite tracking of soil by vehicles and construction equipment and procedures for cleanup and reporting of non-stormwater discharges, such as contaminated groundwater or accidental spills.***
- c. Construction activities shall not begin until all required permits have been obtained and submitted to the Engineer.***

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MATERIALS

~~102-2.1 Grass.~~ Grass that will not compete with the grasses sown later for permanent cover per Item T-901 shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

~~102-2.2 Mulches.~~ Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per Item T-908. Mulches shall not create a wildlife attractant.

~~102-2.3 Fertilizer.~~ Fertilizer shall be a standard commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

~~102-2.4 Slope drains.~~ Slope drains may be constructed of pipe, fiber mats, rubble, concrete, asphalt, or other materials that will adequately control erosion.

102-2.5 Silt fence. Silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

102-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project. ***Other material will also be in conformance with permit conditions for the project.***

CONSTRUCTION REQUIREMENTS

102-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The RPR **Contractor** shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules in accordance with ***the SWPPP specified in 102-1.2b***, the approved Construction Safety and Phasing Plan (CSPP), and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; ***excavating; embanking;*** construction; paving; and structures at watercourses. ***As part of the SWPPP, the Contractor shall also submit a proposed method of erosion and dust control, within the limits of work, on haul roads and borrow pits and a plan for disposal of waste materials. The plan will address frequency of inspection and maintenance of the pollution control features throughout the duration of construction.*** Work shall not be started until: the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR ***1) the SWPPP, together with schedules and methods of operation for the applicable construction have been accepted by the Engineer, and 2) applicable permits have been issued by the regulatory agencies having jurisdiction over the work.***

102-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope

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protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

The Contractor shall be responsible for providing temporary measures as needed to adequately control dust during construction. Dust, as discussed herein, may be from blowing soil, Portland cement, dry grass, or other such materials.

Required methods of controlling dust and other air pollutants will include but are not limited to:

- ***Exposing the minimum area of erodible earth.***
- ***Using water sprinkler trucks.***
- ***Using covered haul trucks. This method is required for trucks hauling borrow excavation on any roadway.***
- ***Using dust palliatives or penetration asphalt on haul roads.***
- ***Using plastic sheet coverings.***

Dust control at an operational airfield is of the utmost importance because excessive dust can restrict sight distance and damage aircraft engines. The Owner reserves the right to shut down or restrict construction operations when excessive dust, as determined by the RPR, could impact air navigation or airfield operations. Such a

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restriction or shutdown may not be used as the basis for additional costs or contract time.

The cost of temporary measures to control dust shall be incidental to the Contract and no separate payment will be made for these measures.

Contractor shall periodically inspect the pollution control features at the intervals stated in the approved Pollution Control Plan, and immediately after each rainfall and at least daily during prolonged rainfall. Contractor will immediately correct any deficiencies. Review the location of pollution control features for effectiveness. If deficiencies exist, correct as directed by Engineer.

There shall be no additional or separate compensation paid to Contractor for such work.

Remove sediment deposits when the deposit reaches approximately 1/3 of the volume capacity of the sediment control feature, or as required. Remove all sediment deposits when the sediment control feature is removed. Grade and dress area to restore to preconstruction condition or finish grade as called for on the plans.

In compliance with General Provision Section 50, Contractor shall continuously maintain permanent and temporary pollution control features. Maintenance shall include periodic watering and mowing of grassed areas. There shall be no additional or separate compensation paid to Contractor for such work. If construction is suspended Contractor shall inspect, maintain and operate temporary and permanent pollution control features during such suspension. If suspension is part of the project phasing and sequencing plan, or if the suspension is requested by Contractor, there shall be no additional or separate compensation paid to Contractor to inspect, maintain and operate the pollution control facilities.

102-3.4 Installation, maintenance and removal of silt fence. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence.

The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the RPR.

102-3.5 Additional Requirements. Additional construction requirements as given in Section 104-1 thru 104-8 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition, must be followed.

In compliance with Florida Department of Environmental Protection (FDEP) Document 62-621.300(4)(a), F.A.C., contractor shall provide Engineer and Owner with copies approved permit documentation obtained for any discharges to surface waters under the National Pollutant Discharge Elimination System (NPDES) as required. Copies of SWPPP report and daily reports shall be provided to Engineer and Owner. Daily reports shall be provided on a weekly basis or as directed by Engineer.

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**METHOD OF
MEASUREMENT**

102-4.1 Temporary erosion and pollution control work required *which is not attributed to the Contractor's negligence, carelessness, or failure to install permanent controls* will be performed as scheduled or directed by the RPR. ~~Completed and accepted work will be measured as follows:~~ **Measurement of Temporary Erosion and Pollution Control shall be lump sum.**

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor **with costs included in the contract prices bid for the items to which they apply.**

BASIS OF PAYMENT

102-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 will be paid for under:

Item C-102-5.1 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control
 – per Lump Sum

~~Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.~~

~~Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 Payment for Extra Work.~~

Progress payments will be based on the percentage of the lump sum price equal to the percentage of the total contract price due to the Contractor. Progress payments shall be subject to retainage.

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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5200-33 *Hazardous Wildlife Attractants on or Near Airports*

AC 150/5370-2 *Operational Safety on Airports During Construction*

ASTM International (ASTM)

ASTM D6461 *Standard Specification for Silt Fence Materials*

United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

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ITEM C-105 MOBILIZATION

105-1.1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material, and supplies, *and incidentals* to and from the project site for work on the project except as provided in the contract as separate pay items.

105-1.2 *The costs for the establishment by the Contractor of staging areas, temporary offices, temporary fencing and gates, building facilities, all utilities, security elements, temporary access roads, safety equipment and first aid supplies, sanitary and other facilities, as required by these Contract Documents, any Federal, State and local laws and regulations. The preparation, submittal and approval of initial project schedule, construction sequencing plan, shop drawings, submittals, and the cost to maintain and restore project elements to preconstruction condition, including sodding.*

105-1.3 *The costs of bonds and any required insurance and other preconstruction expense necessary for the start of the work, excluding the cost of construction materials, shall be included in this item.*

105-1.4 *This item of work will also include any other item or items of work shown, implied or required for the completion of the project that are not directly paid for under other pay items.*

105-1.5 *All costs associated with the required meetings and coordination with the City, and City's Representative, in addition, all costs associated with the Contractor badging shall be included in this item.*

105-1.6 DEMOBILIZATION. *The Contractor shall completely de-mobilize all equipment, vehicles, materials, offices, and waste within 30 days of final acceptance. Remaining retainage will not be released until all deficient work is corrected and the Contractor has completely demobilized from the project site.*

105-2 Mobilization limit. Mobilization shall be limited to **10** percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Engineer/RPR field office. *An Engineer/RPR field office is not required.*

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METHOD OF MEASUREMENT

105-5 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation*, the final 10%.

The standard retainage will be applied to these allowances. Partial payments made on this item shall in no way act to preclude or limit any of the provisions for partial payments otherwise provided for by the Contract.

BASIS OF PAYMENT

105-6 Payment will be made under:

Item C-105-6.1 Mobilization – Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

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**ITEM C-110 METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN
SPECIFICATION LIMITS (PWL)**

110-1 General. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (\bar{X}) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-2 Method for computing PWL. The computational sequence for computing PWL is as follows:

- a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.
- b. Locate the random sampling position within the subplot in accordance with the requirements of the specification.
- c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.
- d. Find the sample average (\bar{X}) for all subplot test values within the lot by using the following formula:

$$\bar{X} = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

Where: \bar{X} = Sample average of all subplot test values within a lot

x_1, x_2, \dots, x_n = Individual subplot test values

n = Number of subplot test values

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- e. Find the sample standard deviation (S_n) by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2 + \dots + d_n^2)/(n-1)]^{1/2}$$

Where: S_n = Sample standard deviation of the number of subplot test values in the set

d_1, d_2, \dots, d_n = Deviations of the individual subplot test values x_1, x_2, \dots from the average value X

that is: $d_1 = (x_1 - X), d_2 = (x_2 - X) \dots d_n = (x_n - X)$

n = Number of subplot test values

- f. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

$$Q_L = (X - L) / S_n$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L , using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

- g. For double-sided specification limits (i.e., L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$Q_L = (X - L) / S_n$$

and

$$Q_U = (U - X) / S_n$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U , using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U . Determine the PWL by use of the following formula:

$$PWL = (P_U + P_L) - 100$$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

A-1 = 96.60

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$$A-2 = 97.55$$

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$n = 4$$

2. Calculate average density for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$$

$$X = 97.95\% \text{ density}$$

3. Calculate the standard deviation for the lot.

$$S_n = \left[\frac{((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2)}{(4 - 1)} \right]^{1/2}$$

$$S_n = \left[\frac{(1.82 + 0.16 + 1.82 + 0.16)}{3} \right]^{1/2}$$

$$S_n = 1.15$$

4. Calculate the Lower Quality Index Q_L for the lot. ($L=96.3$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (97.95 - 96.30) / 1.15$$

$$Q_L = 1.4348$$

5. Determine PWL by entering Table 1 with $Q_L=1.44$ and $n=4$.

$$PWL = 98$$

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

$$A-1 = 5.00$$

$$A-2 = 3.74$$

$$A-3 = 2.30$$

$$A-4 = 3.25$$

2. Calculate the average air voids for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$X = 3.57\%$$

3. Calculate the standard deviation S_n for the lot.

$$S_n = \left[\frac{((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2)}{(4 - 1)} \right]^{1/2}$$

$$S_n = \left[\frac{(2.04 + 0.03 + 1.62 + 0.10)}{3} \right]^{1/2}$$

$$S_n = 1.12$$

4. Calculate the Lower Quality Index Q_L for the lot. ($L=2.0$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (3.57 - 2.00) / 1.12$$

$$Q_L = 1.3992$$

5. Determine P_L by entering Table 1 with $Q_L=1.41$ and $n=4$.

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$$P_L = 97$$

6. Calculate the Upper Quality Index Q_U for the lot. ($U = 5.0$)

$$Q_U = (U - X) / S_n$$

$$Q_U = (5.00 - 3.57) / 1.12$$

$$Q_U = 1.2702$$

7. Determine P_U by entering Table 1 with $Q_U = 1.29$ and $n = 4$.

$$P_U = 93$$

8. Calculate Air Voids PWL

$$PWL = (P_L + P_U) - 100$$

$$PWL = (97 + 93) - 100 = 90$$

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$A-2 = 97.55$$

$$A-1 = 96.60$$

2. From ASTM E178, Table 1, for $n=4$ an upper 5% significance level, the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

- a. For measurements greater than the average:

If (measurement - average)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-3, check if $(99.30 - 97.95) / 1.15$ is greater than 1.463.

Since 1.174 is less than 1.463, the value is not an outlier.

- b. For measurements less than the average:

If (average - measurement)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-1, check if $(97.95 - 96.60) / 1.15$ is greater than 1.463.

Since 1.435 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

$$\text{Greater than } (97.95 + 1.463 \times 1.15) = 99.63\%$$

OR

$$\text{less than } (97.95 - 1.463 \times 1.15) = 96.27\%.$$

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Table 1. Table for Estimating Percent of Lot Within Limits (PWL)

| Percent Within Limits (P _L and P _U) | Positive Values of Q (Q _L and Q _U) | | | | | | | |
|---|---|--------|--------|--------|--------|--------|--------|--------|
| | n=3 | n=4 | n=5 | n=6 | n=7 | n=8 | n=9 | n=10 |
| 99 | 1.1541 | 1.4700 | 1.6714 | 1.8008 | 1.8888 | 1.9520 | 1.9994 | 2.0362 |
| 98 | 1.1524 | 1.4400 | 1.6016 | 1.6982 | 1.7612 | 1.8053 | 1.8379 | 1.8630 |
| 97 | 1.1496 | 1.4100 | 1.5427 | 1.6181 | 1.6661 | 1.6993 | 1.7235 | 1.7420 |
| 96 | 1.1456 | 1.3800 | 1.4897 | 1.5497 | 1.5871 | 1.6127 | 1.6313 | 1.6454 |
| 95 | 1.1405 | 1.3500 | 1.4407 | 1.4887 | 1.5181 | 1.5381 | 1.5525 | 1.5635 |
| 94 | 1.1342 | 1.3200 | 1.3946 | 1.4329 | 1.4561 | 1.4717 | 1.4829 | 1.4914 |
| 93 | 1.1269 | 1.2900 | 1.3508 | 1.3810 | 1.3991 | 1.4112 | 1.4199 | 1.4265 |
| 92 | 1.1184 | 1.2600 | 1.3088 | 1.3323 | 1.3461 | 1.3554 | 1.3620 | 1.3670 |
| 91 | 1.1089 | 1.2300 | 1.2683 | 1.2860 | 1.2964 | 1.3032 | 1.3081 | 1.3118 |
| 90 | 1.0982 | 1.2000 | 1.2290 | 1.2419 | 1.2492 | 1.2541 | 1.2576 | 1.2602 |
| 89 | 1.0864 | 1.1700 | 1.1909 | 1.1995 | 1.2043 | 1.2075 | 1.2098 | 1.2115 |
| 88 | 1.0736 | 1.1400 | 1.1537 | 1.1587 | 1.1613 | 1.1630 | 1.1643 | 1.1653 |
| 87 | 1.0597 | 1.1100 | 1.1173 | 1.1192 | 1.1199 | 1.1204 | 1.1208 | 1.1212 |
| 86 | 1.0448 | 1.0800 | 1.0817 | 1.0808 | 1.0800 | 1.0794 | 1.0791 | 1.0789 |
| 85 | 1.0288 | 1.0500 | 1.0467 | 1.0435 | 1.0413 | 1.0399 | 1.0389 | 1.0382 |
| 84 | 1.0119 | 1.0200 | 1.0124 | 1.0071 | 1.0037 | 1.0015 | 1.0000 | 0.9990 |
| 83 | 0.9939 | 0.9900 | 0.9785 | 0.9715 | 0.9671 | 0.9643 | 0.9624 | 0.9610 |
| 82 | 0.9749 | 0.9600 | 0.9452 | 0.9367 | 0.9315 | 0.9281 | 0.9258 | 0.9241 |
| 81 | 0.9550 | 0.9300 | 0.9123 | 0.9025 | 0.8966 | 0.8928 | 0.8901 | 0.8882 |
| 80 | 0.9342 | 0.9000 | 0.8799 | 0.8690 | 0.8625 | 0.8583 | 0.8554 | 0.8533 |
| 79 | 0.9124 | 0.8700 | 0.8478 | 0.8360 | 0.8291 | 0.8245 | 0.8214 | 0.8192 |
| 78 | 0.8897 | 0.8400 | 0.8160 | 0.8036 | 0.7962 | 0.7915 | 0.7882 | 0.7858 |
| 77 | 0.8662 | 0.8100 | 0.7846 | 0.7716 | 0.7640 | 0.7590 | 0.7556 | 0.7531 |
| 76 | 0.8417 | 0.7800 | 0.7535 | 0.7401 | 0.7322 | 0.7271 | 0.7236 | 0.7211 |
| 75 | 0.8165 | 0.7500 | 0.7226 | 0.7089 | 0.7009 | 0.6958 | 0.6922 | 0.6896 |
| 74 | 0.7904 | 0.7200 | 0.6921 | 0.6781 | 0.6701 | 0.6649 | 0.6613 | 0.6587 |
| 73 | 0.7636 | 0.6900 | 0.6617 | 0.6477 | 0.6396 | 0.6344 | 0.6308 | 0.6282 |
| 72 | 0.7360 | 0.6600 | 0.6316 | 0.6176 | 0.6095 | 0.6044 | 0.6008 | 0.5982 |
| 71 | 0.7077 | 0.6300 | 0.6016 | 0.5878 | 0.5798 | 0.5747 | 0.5712 | 0.5686 |
| 70 | 0.6787 | 0.6000 | 0.5719 | 0.5582 | 0.5504 | 0.5454 | 0.5419 | 0.5394 |
| 69 | 0.6490 | 0.5700 | 0.5423 | 0.5290 | 0.5213 | 0.5164 | 0.5130 | 0.5105 |
| 68 | 0.6187 | 0.5400 | 0.5129 | 0.4999 | 0.4924 | 0.4877 | 0.4844 | 0.4820 |
| 67 | 0.5878 | 0.5100 | 0.4836 | 0.4710 | 0.4638 | 0.4592 | 0.4560 | 0.4537 |
| 66 | 0.5563 | 0.4800 | 0.4545 | 0.4424 | 0.4355 | 0.4310 | 0.4280 | 0.4257 |
| 65 | 0.5242 | 0.4500 | 0.4255 | 0.4139 | 0.4073 | 0.4030 | 0.4001 | 0.3980 |
| 64 | 0.4916 | 0.4200 | 0.3967 | 0.3856 | 0.3793 | 0.3753 | 0.3725 | 0.3705 |
| 63 | 0.4586 | 0.3900 | 0.3679 | 0.3575 | 0.3515 | 0.3477 | 0.3451 | 0.3432 |
| 62 | 0.4251 | 0.3600 | 0.3392 | 0.3295 | 0.3239 | 0.3203 | 0.3179 | 0.3161 |
| 61 | 0.3911 | 0.3300 | 0.3107 | 0.3016 | 0.2964 | 0.2931 | 0.2908 | 0.2892 |
| 60 | 0.3568 | 0.3000 | 0.2822 | 0.2738 | 0.2691 | 0.2660 | 0.2639 | 0.2624 |
| 59 | 0.3222 | 0.2700 | 0.2537 | 0.2461 | 0.2418 | 0.2391 | 0.2372 | 0.2358 |
| 58 | 0.2872 | 0.2400 | 0.2254 | 0.2186 | 0.2147 | 0.2122 | 0.2105 | 0.2093 |
| 57 | 0.2519 | 0.2100 | 0.1971 | 0.1911 | 0.1877 | 0.1855 | 0.1840 | 0.1829 |
| 56 | 0.2164 | 0.1800 | 0.1688 | 0.1636 | 0.1607 | 0.1588 | 0.1575 | 0.1566 |
| 55 | 0.1806 | 0.1500 | 0.1406 | 0.1363 | 0.1338 | 0.1322 | 0.1312 | 0.1304 |
| 54 | 0.1447 | 0.1200 | 0.1125 | 0.1090 | 0.1070 | 0.1057 | 0.1049 | 0.1042 |
| 53 | 0.1087 | 0.0900 | 0.0843 | 0.0817 | 0.0802 | 0.0793 | 0.0786 | 0.0781 |
| 52 | 0.0725 | 0.0600 | 0.0562 | 0.0544 | 0.0534 | 0.0528 | 0.0524 | 0.0521 |
| 51 | 0.0363 | 0.0300 | 0.0281 | 0.0272 | 0.0267 | 0.0264 | 0.0262 | 0.0260 |
| 50 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

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| Percent Within Limits (P _L and P _U) | Negative Values of Q (Q _L and Q _U) | | | | | | | |
|---|---|---------|---------|---------|---------|---------|---------|---------|
| | n=3 | n=4 | n=5 | n=6 | n=7 | n=8 | n=9 | n=10 |
| 49 | -0.0363 | -0.0300 | -0.0281 | -0.0272 | -0.0267 | -0.0264 | -0.0262 | -0.0260 |
| 48 | -0.0725 | -0.0600 | -0.0562 | -0.0544 | -0.0534 | -0.0528 | -0.0524 | -0.0521 |
| 47 | -0.1087 | -0.0900 | -0.0843 | -0.0817 | -0.0802 | -0.0793 | -0.0786 | -0.0781 |
| 46 | -0.1447 | -0.1200 | -0.1125 | -0.1090 | -0.1070 | -0.1057 | -0.1049 | -0.1042 |
| 45 | -0.1806 | -0.1500 | -0.1406 | -0.1363 | -0.1338 | -0.1322 | -0.1312 | -0.1304 |
| 44 | -0.2164 | -0.1800 | -0.1688 | -0.1636 | -0.1607 | -0.1588 | -0.1575 | -0.1566 |
| 43 | -0.2519 | -0.2100 | -0.1971 | -0.1911 | -0.1877 | -0.1855 | -0.1840 | -0.1829 |
| 42 | -0.2872 | -0.2400 | -0.2254 | -0.2186 | -0.2147 | -0.2122 | -0.2105 | -0.2093 |
| 41 | -0.3222 | -0.2700 | -0.2537 | -0.2461 | -0.2418 | -0.2391 | -0.2372 | -0.2358 |
| 40 | -0.3568 | -0.3000 | -0.2822 | -0.2738 | -0.2691 | -0.2660 | -0.2639 | -0.2624 |
| 39 | -0.3911 | -0.3300 | -0.3107 | -0.3016 | -0.2964 | -0.2931 | -0.2908 | -0.2892 |
| 38 | -0.4251 | -0.3600 | -0.3392 | -0.3295 | -0.3239 | -0.3203 | -0.3179 | -0.3161 |
| 37 | -0.4586 | -0.3900 | -0.3679 | -0.3575 | -0.3515 | -0.3477 | -0.3451 | -0.3432 |
| 36 | -0.4916 | -0.4200 | -0.3967 | -0.3856 | -0.3793 | -0.3753 | -0.3725 | -0.3705 |
| 35 | -0.5242 | -0.4500 | -0.4255 | -0.4139 | -0.4073 | -0.4030 | -0.4001 | -0.3980 |
| 34 | -0.5563 | -0.4800 | -0.4545 | -0.4424 | -0.4355 | -0.4310 | -0.4280 | -0.4257 |
| 33 | -0.5878 | -0.5100 | -0.4836 | -0.4710 | -0.4638 | -0.4592 | -0.4560 | -0.4537 |
| 32 | -0.6187 | -0.5400 | -0.5129 | -0.4999 | -0.4924 | -0.4877 | -0.4844 | -0.4820 |
| 31 | -0.6490 | -0.5700 | -0.5423 | -0.5290 | -0.5213 | -0.5164 | -0.5130 | -0.5105 |
| 30 | -0.6787 | -0.6000 | -0.5719 | -0.5582 | -0.5504 | -0.5454 | -0.5419 | -0.5394 |
| 29 | -0.7077 | -0.6300 | -0.6016 | -0.5878 | -0.5798 | -0.5747 | -0.5712 | -0.5686 |
| 28 | -0.7360 | -0.6600 | -0.6316 | -0.6176 | -0.6095 | -0.6044 | -0.6008 | -0.5982 |
| 27 | -0.7636 | -0.6900 | -0.6617 | -0.6477 | -0.6396 | -0.6344 | -0.6308 | -0.6282 |
| 26 | -0.7904 | -0.7200 | -0.6921 | -0.6781 | -0.6701 | -0.6649 | -0.6613 | -0.6587 |
| 25 | -0.8165 | -0.7500 | -0.7226 | -0.7089 | -0.7009 | -0.6958 | -0.6922 | -0.6896 |
| 24 | -0.8417 | -0.7800 | -0.7535 | -0.7401 | -0.7322 | -0.7271 | -0.7236 | -0.7211 |
| 23 | -0.8662 | -0.8100 | -0.7846 | -0.7716 | -0.7640 | -0.7590 | -0.7556 | -0.7531 |
| 22 | -0.8897 | -0.8400 | -0.8160 | -0.8036 | -0.7962 | -0.7915 | -0.7882 | -0.7858 |
| 21 | -0.9124 | -0.8700 | -0.8478 | -0.8360 | -0.8291 | -0.8245 | -0.8214 | -0.8192 |
| 20 | -0.9342 | -0.9000 | -0.8799 | -0.8690 | -0.8625 | -0.8583 | -0.8554 | -0.8533 |
| 19 | -0.9550 | -0.9300 | -0.9123 | -0.9025 | -0.8966 | -0.8928 | -0.8901 | -0.8882 |
| 18 | -0.9749 | -0.9600 | -0.9452 | -0.9367 | -0.9315 | -0.9281 | -0.9258 | -0.9241 |
| 17 | -0.9939 | -0.9900 | -0.9785 | -0.9715 | -0.9671 | -0.9643 | -0.9624 | -0.9610 |
| 16 | -1.0119 | -1.0200 | -1.0124 | -1.0071 | -1.0037 | -1.0015 | -1.0000 | -0.9990 |
| 15 | -1.0288 | -1.0500 | -1.0467 | -1.0435 | -1.0413 | -1.0399 | -1.0389 | -1.0382 |
| 14 | -1.0448 | -1.0800 | -1.0817 | -1.0808 | -1.0800 | -1.0794 | -1.0791 | -1.0789 |
| 13 | -1.0597 | -1.1100 | -1.1173 | -1.1192 | -1.1199 | -1.1204 | -1.1208 | -1.1212 |
| 12 | -1.0736 | -1.1400 | -1.1537 | -1.1587 | -1.1613 | -1.1630 | -1.1643 | -1.1653 |
| 11 | -1.0864 | -1.1700 | -1.1909 | -1.1995 | -1.2043 | -1.2075 | -1.2098 | -1.2115 |
| 10 | -1.0982 | -1.2000 | -1.2290 | -1.2419 | -1.2492 | -1.2541 | -1.2576 | -1.2602 |
| 9 | -1.1089 | -1.2300 | -1.2683 | -1.2860 | -1.2964 | -1.3032 | -1.3081 | -1.3118 |
| 8 | -1.1184 | -1.2600 | -1.3088 | -1.3323 | -1.3461 | -1.3554 | -1.3620 | -1.3670 |
| 7 | -1.1269 | -1.2900 | -1.3508 | -1.3810 | -1.3991 | -1.4112 | -1.4199 | -1.4265 |
| 6 | -1.1342 | -1.3200 | -1.3946 | -1.4329 | -1.4561 | -1.4717 | -1.4829 | -1.4914 |
| 5 | -1.1405 | -1.3500 | -1.4407 | -1.4887 | -1.5181 | -1.5381 | -1.5525 | -1.5635 |
| 4 | -1.1456 | -1.3800 | -1.4897 | -1.5497 | -1.5871 | -1.6127 | -1.6313 | -1.6454 |
| 3 | -1.1496 | -1.4100 | -1.5427 | -1.6181 | -1.6661 | -1.6993 | -1.7235 | -1.7420 |
| 2 | -1.1524 | -1.4400 | -1.6016 | -1.6982 | -1.7612 | -1.8053 | -1.8379 | -1.8630 |
| 1 | -1.1541 | -1.4700 | -1.6714 | -1.8008 | -1.8888 | -1.9520 | -1.9994 | -2.0362 |

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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM E178 Standard Practice for Dealing with Outlying Observations

END OF ITEM C-110

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**RW 9 RUN-UP AREA AND
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REQUIREMENTS****GENERAL****102-1.1 SUMMARY**

- a.** The work specified in this Section consists of airport safety and maintaining traffic within the limits of the project for the duration of the construction period. It shall include the construction and maintenance of any necessary detour facilities along the project and the furnishing, installing and maintaining of traffic control and safety devices required for safe and expeditious movement of traffic as may be called for on the plans. The term "Maintenance of Traffic" or MOT as used herein shall include all of such facilities, devices and operations as are required for the safety and convenience of the Airport users as well as for minimizing public nuisance; all as specified in this Section. The Section also includes installing temporary orange plastic fencing around any owl or tortoise nests, as directed by the Engineer or Owner's Representative.
- b.** The Contractor shall carry out its operations in a manner that will cause a minimum of interference with air traffic, and shall be required to cooperate with the Federal Aviation Administration (FAA), the Fort Lauderdale Executive Airport, airport operations, and other contractors working in the area. All work shall be completed in accordance with the Contract Documents including the Safety Program and FAA Advisory Circular 150/5370-2F, Operational Safety on Airports during Construction or current edition as of bid date.
- c.** The Contractor shall supply, place, maintain, move and store the items listed herein, as appropriate, to facilitate construction and protect air traffic. The Contractor shall maintain an adequate extra supply of these items on site.
- d.** The generalized overviews presented in this document are statements of expectations that the Contractor will be measured against. Failure to meet these requirements may be grounds for the removal of the individual employee from the worksite and could also lead to grounds for termination of the Contract by the City.
- e.** The Contractor shall provide an on-site safety coordinator for the duration of the contract if the value of the work to be performed is in excess of \$250,000 and requires more than four hundred (400) man-hours to be completed for the duration of any one week. If less than four hundred (400) man-hours are worked in a work week, then a Safety Coordinator shall be appointed, but does not have to be onsite.
- f.** The Contractor must not interfere with or make more difficult or expensive Airport's compliance with any law, statute, code, ordinance or regulation. The Airport will notify the Contractor, orally or in writing, and the Contractor shall

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within forty-eight hours of receiving Airport's notification make whatever changes are necessary to remedy the situation, including, without limitation, changes in the work schedule, installation of safety devices. Airport's exercise of its rights under this provision will not be grounds for an increase in the Contract Sum under the Contract.

- g.** The Fort Lauderdale Executive Airport has the right to monitor (Contractor shall still be responsible for assuring safe work practices) the Contractors' operations for safety performance, workmanship, protection of operations, work progress, housekeeping, and compliance to design specifications. It is a general practice that the Fort Lauderdale Executive Airport will work through the Contractor's supervision and not directly with the employee. The Fort Lauderdale Executive Airport has the right to participate with and investigate any accident or incident.

102-1.2 DEFINITIONS. Safety Program – The Contractor shall submit its Safety Program to the Fort Lauderdale Executive Airport and obtain approval prior to issuance of the Notice to Proceed. The Safety Program shall be prepared in accordance with the FAA Advisory Circular 150/5370-2F, or current edition as of bid date, Operation Safety on Airports During Construction and the Airport's Safety Program requirements defined in this Airport Safety Requirements section. The Safety Program includes, but is not limited to the following:

1. Contractor's Corporate Safety Policy
2. Contractor's Site Specific Safety Plan
3. Construction Safety and Phasing Plan (CSPP) – The Contractor shall abide by the CSPP, approved by the FAA and provided by Fort Lauderdale Executive Airport.
4. Safety Plan Compliance Document (SPCD) – The SPCD details how the contractor will comply with the CSPP. The Contractor shall prepare the SPCD and obtain approval by Fort Lauderdale Executive Airport prior to issuance of the Notice to Proceed.

PRODUCTS

102-2.1 WARNING LIGHTS. Warning lights shall meet the requirements of FAA Advisory Circular 150/5370-2F, or current edition as of bid date, Operational Safety on Airport during Construction. The Contractor's vehicles shall meet the requirements of FAA Advisory Circular 150/5210-5D or current edition as of bid date, Painting, Marking, and Lighting of Vehicles Used on an Airport.

102-2.2 LOW PROFILE BARRICADES. The terms "low profile barricades" and "low level airfield barricades" are used interchangeably in this contract. Low profile barricades shall be in accordance with the details in the Contract Documents and meet the requirements of FAA Advisory Circular 150/5370-2F, or current edition as of bid date. The barricades shall be furnished, maintained and relocated during each phase by the Contractor. Barricades shall be as detailed and installed along the affected pavement edge or access to a closed runway, taxiway or apron.

- a.** Contractor shall have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades.

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- b. The contractor must file the contact person's information with the airport operator.
- c. Lighting should be checked by contractor for proper operation at least once per day, preferably at dusk.
- d. ***Barricades are to be installed as per the direction of the owner or RPR. Multiple rows of barricades may be necessary to delineate aircraft movement limits outside of the phase as well as where the workers can navigate within the closed area. Additional barricades than those shown in the plans may be necessary. All barricades directed to be placed within this project shall be covered under the MOT Pay Item.***

102-2.3 SAFETY FENCE. Safety fence shall be furnished and installed at the locations as indicated on the Contract Documents and/or directed by the Resident Project Representative (RPR).

102-2.4 VACUUM SWEEPER. Only vacuum sweepers will be allowed on the airfield by default. If the Contractor wishes to use a broom type sweeper, the request must be submitted to the City for approval. If the City approves a broom type sweeper, only nylon bristles will be allowed.

102-2.5 RUNWAY CLOSURE MARKER (LIGHTED X). Contractor shall provide runway closure markers as needed during construction. Contractor will be responsible for placement, relocation, maintenance, and removal of the lighted X's. Contractor shall be responsible for fuel, maintaining tire pressure, replacement light bulbs, other maintenance, and repairs to keep the units in good working order. Contractor shall be responsible for repair of all pavement damage that may result from fueling and operation of runway closure markers. Contractor will maintain ownership of runway closure markers at project completion.

102-2.6 TAXIWAY CLOSURE MARKER. Taxiway closure markers shall be furnished and installed at the locations as indicated on the Contract Documents and/or directed by the RPR.

102-2.7 PORTABLE LIGHT TOWERS. The Contractor shall provide portable light towers as required for work. The towers shall be trailer mounted, that can be folded for easy transport and storage. The towers shall contain a diesel generator to power a minimum 6000 watts and have fuel capacity to operate at full load for a minimum of 48 hours. It shall be designed to be weather proof. The towers shall be telescoping and capable of rotating over 360 degrees and shall have a minimum of four 1,000 watt metal halide floodlights. Contractor shall be responsible for repair of all pavement damage that may result from fueling and operation of portable light towers.

102-2.8 PORTABLE GUARD SHACK. The Contractor shall provide a portable security guard shack with AC, lights, and generator at the construction access gate. The security guard shack shall be manned during construction hours.

EXECUTION**102-3.1 GENERAL INFORMATION.**

- a. All Contractors will comply with the following:

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1. All applicable Occupational Safety and Health Administration (OSHA), Federal Aviation Administration (FAA), Federal Aviation Regulations (FAR), Transportation Security Administration (TSA) Part 1542, Department of Transportation (DOT), Airport Ordinances, Federal, State, and Local safety standards.
 2. Other reasonable safety rules and practices as may be established from time to time by the Fort Lauderdale Executive Airport.
- b. In compliance with FAA AC 150/5370-2F, or current edition as of bid date, the Contractor shall prepare a Safety Plan Compliance Document (SPCD). This document shall include a general statement by the Contractor that he/she has read and will abide by the CSPP. Any details not identifiable for the CSPP should be included within the SPCD. The SPCD is similar to the CSPP but shall not contain duplicate information. The contractor must submit the SPCD to the Fort Lauderdale Executive Airport for approval prior to the issuance of the NTP. The SPCD shall include but not be limited to the following Checklist as applicable to the scope of the project:
1. **Coordination.** Discuss details of proposed safety meetings with the Airport and with contractor employees and subcontractors.
 2. **Phasing.** Discuss proposed construction schedule elements, including:
 - i. Duration of each phase.
 - ii. Daily start and finish of construction, including "night only" construction.
 - iii. Duration of construction activities during:
 1. Normal runway operations.
 2. Closed runway operations.
 3. Modified runway "Aircraft Reference Code" usage.
 3. **Areas and operations affected by the construction activity.** These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
 4. **Protection of NAVAIDS.** Discuss specific methods proposed to protect operating NAVAIDS.
 5. **Contractor access.** Provide the following:
 - i. Details on how the Contractor will maintain the integrity of the Airport security fence (contract security officers, daily log of construction personnel, and other).
 - ii. Listing of individual requiring driver training (for certificated airports and as requested).
 - iii. Radio communications.
 1. Airport Operations will communicate with the Air Traffic control tower.
 2. Types of radios and backup capabilities.
 3. Who will be monitoring radios.
 4. Details on how the contractor will escort material delivery vehicles.
 6. **Wildlife management.** Discuss the following:
 - i. Methods and procedures to prevent wildlife attraction.
 - ii. Wildlife reporting procedures.
 7. **Foreign Object Debris (FOD) management.** Discuss equipment and methods for control of FOD, including construction debris and dust.

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8. **Hazardous material (HAZMAT) management.** Discuss equipment and methods for responding to hazardous spills.
 9. **Notification of construction activities.** Provide the following:
 - i. Contractor points of contact.
 - ii. Contractor emergency contact.
 - iii. Listing of tall or other requested equipment proposed for use on the airport and the time frame for submitting 7460-1 forms not previously submitted by the Airport operator.
 10. **Inspection requirements.** Discuss daily (or more frequent) inspections and special inspection procedures.
 11. **Underground utilities.** Discuss proposed methods of identifying and protecting underground utilities.
 12. **Penalties.** Penalties should be identified in the CSPP and should not require an entry in the SPCD.
 13. **Special conditions.** Discuss proposed actions for each special condition identified in the CSPP.
 14. **Runway and taxiway visual aids.** Including marking, lighting, signs and visual NAVAIDs. Discuss proposed visual aids including the following:
 - i. Equipment and methods for covering signage and airfield lights.
 - ii. Equipment and methods for temporary closure markings (paint, fabric, other).
 - iii. Types of temporary Visual Guidance Slope Indicators (VGSI).
 15. **Markings and signs for access routes.** Discuss proposed methods of demarcating access routes for vehicle drivers.
 16. **Hazard marking and lighting.** Discuss proposed equipment and methods for identifying excavation areas.
 17. **Protection of runway and taxiway safety areas.** Including object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
 - i. Equipment and methods for maintaining Taxiway Safety Area standards.
 - ii. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
 18. **Other limitations on construction** should be identified in the CSPP and should not require an entry in the SPCD.
- c. The Safety Program, including the SPCD, shall be submitted to the Fort Lauderdale Executive Airport for review.
- d. Regular progress meetings will be conducted during construction. Part of the meeting will be dedicated to safety. During these meetings, the Contractor shall submit to the Fort Lauderdale Executive Airport the following safety information:
1. Estimated man-hours worked from the previous period;
 2. Number of near misses from the previous period;
 3. Number of accidents from the previous periods;
 4. Number of recordable injuries from the previous period; and
 5. Summarization of any accident that took place from the previous period.

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- e. In estimating the work involved in the Contract, the Contractor shall be familiar with all existing and limiting conditions that will or may have a bearing on the performance of the Contract with regard to safety. Any limiting conditions shall be identified in writing.
- f. All costs related to the required Safety Program shall be included in the Contractor's bid. Costs provided to administer and maintain the Safety Program shall be complete and shall include costs for all required personnel, activities, facilities, media, tools, drug testing, and any specialty equipment required to ensure a comprehensive, qualified Safety Program to suit a per week/per shift basis.
- g. Prior to mobilization the Contractor shall complete a Contractor Employee Review of the Contractor Safety Guidelines. This document shall be kept on site and updated for every new employee who will work on the project.
- h. Authorized Movement Area routes will be determined by the City. The Contractor shall not enter or cross any open runway or taxiway without an authorized escort. Non-compliance will result in removal of the violator from the job site and the violator's Airport Identification Badge will be confiscated. Emergencies and operating conditions may necessitate sudden changes, both in Airport operations and in the operations of the Contractor. Aircraft operations shall always have priority over any and all of the Contractor's operations. Should runways or taxiways be required for the use of aircraft and should Airport Operations, the Control Tower, or the Airport Engineer deem the Contractor to be too close to active runways or taxiways the Contractor shall suspend his operations, remove his personnel, plant, equipment, and materials to a safe distance and stand by until the runways and taxiways are no longer required for use by aircraft. There will be no compensation for delays or inefficiencies due to these changes.
- i. Throughout the duration of the Contract, any practice or situation that the Airport Engineer determines to be unsafe or a hindrance to regular Airport operations shall be immediately rectified.
- j. Prior to commencement of construction activity, the Contractor shall notify in writing, at least 72 hours in advance, Airport Operations and the Airport Engineer of its intentions to begin construction, stating the proposed time, date, and area of which construction is to occur in order for the appropriate Notice-to-Airmen (NOTAM) to be issued. During the performance of this Contract, the Airport facility shall remain in use to the maximum extent possible. The Contractor shall not allow employees, subcontractors, suppliers, or any other unauthorized persons to enter in any Airport area which may be open for aircraft use.
- k. Should, in the opinion of the City, any problem or hazard arise during construction, the Contractor shall immediately rectify/correct the problem or hazard to the satisfaction of the City and the Fort Lauderdale Executive Airport:

102-3.2 CONTRACTOR REQUIREMENTS.

- a. All persons entering the project area designated as the construction site shall strictly follow OSHA, FDEP, FAA, DOT, and TSA regulations.

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- b.** The Contractor shall provide physical barriers along the perimeter of its work site and place signs identifying the area as a construction site. In some cases where the general public or open airfield is to be protected, additional and/or specialty barriers might be required and will need to be determined by the Airport.
- c.** If used, the Contractor shall submit an FAA Form 7460-1 at least 60 days prior to any crane erections. All construction involving cranes shall further be coordinated at least 72 hours in advance, excluding weekends, with the FXE Airfield Operations Department. This does not include the time required for airspacing. The following information and actions are required:
 - 1.** Location of the Crane.
 - 2.** Maximum extendable height.
 - 3.** Hours of operation.
 - 4.** The top of each crane boom shall be marked by a 3' x 3' orange and white checkered flag — each box being 1' square.
 - 5.** Each crane shall be lowered at night and during periods of poor visibility as directed by Airport Operations. In the event the crane is approved to remain extended during the hours from sunset to sunrise, the highest point of the crane boom will be lit with a red obstruction light in accordance with AC 70/7460-1.
- d.** These established safety requirements shall govern Contractors and all persons within the designated construction site and are outlined to avoid infractions of common accepted safety practices.
- e.** These safety requirements shall not be construed as complete and any requirements of the guidelines in conflict with OSHA and FAA shall be superseded by OSHA or FAA regulations.
- f.** Any individual failing to follow these safety requirements will be directed by the Contractor to immediately abate the unsafe act, behavior, or equipment.
- g.** All Contractor equipment brought onsite for use on or during the construction project shall be kept in a safe operating condition. Worn or damaged equipment shall be repaired, replaced or taken out of service (locked out) and removed from the job site.
- h.** Contractor shall keep its work area in a clean and safe condition.
- i.** The use of makeshift, defective or inadequate scaffolding, rigging, or staging is prohibited.
- j.** Contractor shall verify and assure that every employee who operates any mobile equipment on Airport properties shall have a current valid driver's license.
- k.** The Contractor shall comply with the National Electric Code (NEC) requirements regarding ground fault circuit interrupters for construction field tools and equipment.
- l.** The Contractor shall maintain a Safety Program, for the purpose of safety, security, orientation, education, training, enforcement, and distribution.

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- m. If a fire line or any type of fire suppression service is going to be taken out of service, the Contractor must coordinate with the City's Fire Marshal or a designated representative from the Fire Department at least three days in advance. In addition, the contractor shall complete an impairment notification to the insurance carrier.
- n. Contractor will provide all lighted, low profile, water or sand filled, taxiway/runway barricading.
- o. If working on the AOA, the Contractor will be required to prepare an FAA Safety Plan Compliance Document (SPCD) that is a part of the Safety Program.
- p. Employees shall not operate any equipment or vehicles more than 16 hours consecutively.

102-3.3 HAZARDOUS MATERIALS.

- a. Hazardous materials can be easily identified using the U.S. Department of Transportation (DOT) labeling and identification system. All hazardous materials arriving on site shall be properly labeled, stored, and managed as required by the Material Safety Data Sheet (MSDS) for that material.
- b. Contractors and Subcontractors are required to have copies of all MSDS's for all materials brought on site.
- c. Contractor to immediately report spills to Airport Operations.

102-3.4 VEHICLE OPERATION ON AIRPORT OPERATIONS AREA (AOA).

- a. All vehicles that enter the AOA shall comply with the following:
- b. All vehicles accessing the AOA shall be placarded with a company name and logo or some other approved form of identification.
- c. All vehicles shall be limited to the perimeter service road, paved leasehold areas and/or construction areas unless specifically authorized by Airport Operations.
 - 1. All construction vehicles/mechanized equipment authorized within the Movement Area or related safety areas shall be marked with a flag on a staff attached to the uppermost portion of the vehicle/motorized equipment or an amber beacon so that the flag or beacon will be readily visible. The flag shall be at least a 3' x 3' square having a checkered pattern of international orange and white squares at least 1' on each side in accordance with FAA Advisory Circular 150/5210-5.D, or current edition as of bid date. The amber beacon will be as described in this specification.
 - 2. During nighttime hours, all equipment operating on the Airport exceeding 15 feet in height shall be lit with a red obstruction light in accordance with FAA Advisory Circular 70/7460-1, or current edition as of bid date. This light is to be located on the uppermost portion of the equipment.
 - 3. All construction equipment that exceeds 20 feet in height are required to be reviewed by the FAA for conformance with Part 77. This will require the submission of FAA form 7460-1 (submitted at: <http://oeaa.faa.gov>)

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and receipt of a "determination of no hazard to air navigation". The Contractor is also required to notify Airport Operations so that staff may issue any required NOTAMs.

- d.** Contractor utilized bicycles, motorcycles and two-wheeled scooters are prohibited on the AOA.
- e.** Vehicle(s)/equipment shall be operated in a manner that does not interfere with aircraft operations. All vehicle(s)/equipment shall yield right of way to all aircraft and emergency vehicles.
- f.** Vehicles/mechanized equipment operators shall obey all traffic signs and markings.
- g.** Vehicles/equipment shall not stop or be parked so as to block a driveway, AOA access gate, fire lane or aircraft
- h.** Vehicles/equipment shall not stop or be parked in areas other than those prearranged and approved by Airport Operations.
- i.** No equipment or vehicles may be parked within six feet of an AOA fence.
- j.** The established speed limit on the Ramp and AOA is 15 mph.
- k.** Vehicle(s)/equipment shall not be operated by individuals under the influence of any substance which impairs the ability to do so in a safe manner
- l.** If an incident occurs on the AOA, the incident shall be reported immediately to Airport Operations. The Contractor is still obligated to produce its own incident report to be submitted to the Airport upon request. The Contractor is required to submit an incident report no later than 24 hours after the incident.
- m.** Vehicle/mechanized equipment operators are not permitted to move about the Airport, outside the designated construction area, at night unless the vehicle has operating head lights, tail lights and brake lights, or is under the escort of a properly lighted vehicle. Head lights shall not be set on high beam when moving about the Airport at night.
- n.** Vehicles/mechanized equipment authorized on the Movement Area (runways, taxiways, and ramps) and/or associated safety areas shall be equipped with an electrically powered, amber color, 360-degree omni-direction light, mounted on the vehicle such that it is conspicuous from any direction.
- o.** At no time shall a vehicle enter the Movement Area and/or associated safety areas unless it is authorized by Airport Operations.
- p.** Seat belts shall be utilized on equipment/vehicles that are designed for usage.
- q.** The Airport may remove and impound, at the owner's expense, any vehicle/equipment which is disabled, abandoned, improperly parked, or represents an operational hazard
- r.** All vehicles/equipment shall be appropriately secured such that neither aircraft blast nor wind will result in their movement.

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102-3.5 AOA CONTRACTOR ESCORTS AND FLAGGING.

- a. The Contractor shall provide an adequate number of escorts/flaggers for material deliveries along haul routes and the movements of the Contractor's vehicles/mechanized equipment and personnel within the Movement Area and Non-Movement Areas as authorized by Airport Operations.
- b. During any absence of the approved escort(s)/flagger(s) or for periods that they are unable to perform their specified duties, all work within the Movement Area and associated safety areas for projects shall stop. Additionally, all personnel and equipment shall be escorted to approved locations outside the Movement Area and related safety areas. **NO** contract time extension will be granted for time lost due to the absence of escort(s). Work shall resume only with the return of the approved escort(s).
- c. The escort/flagger shall ensure that all equipment maintains proper clearances from moving aircraft.
- d. For flaggers/escorts contracted through the Airport, the Contractor shall be responsible for the cost of each required flagger/escort.

102-3.6 SPECIAL CONSTRUCTION RULES ON THE AOA.

- a. When airfield construction is being performed on the AOA the following rules will apply unless modified in writing by Airport Operations.
- b. All construction activities on the AOA shall include a specific Construction Safety Phasing Plan (CSPP) and a Safety Plan Compliance Document (SPCD) as required by the FAA. The SPCD will address compliance to and details required by the CSPP and include any other topics of discussion that might be mentioned during the safety phase planning meeting.
- c. The safety phase planning meeting shall be held prior to mobilization to the AOA.
- d. Any Airport construction and/or alteration requires the Contractor to complete and submit FAA Form 7460-1 Notice of Proposed Construction or Alteration (available from the FAA Air Traffic Division Regional Office), and www.FAA.gov at least 60 days prior to the start of the project.
- e. The Contractor shall complete and submit FAA Form 7460-1 for all equipment and/or temporary structures, utilized during any Airport construction and/or alteration that exceeds a height of 20 feet above ground level. This includes
 - 1. Cranes;
 - 2. Derricks;
 - 3. Stockpiles of materials or equipment; and
 - 4. Earthmoving equipment.
- f. A copy of all completed FAA Form 7460-1's and the FAA's determination(s) shall be on file with the Airport prior to commencing the erection or construction of the item(s) proposed by the Contractor. The Contractor will provide Airport

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Operations with the FAA determination number, for internet review, or paper copy of the full determination.

- g.** The Contractor shall erect and maintain fencing, barricades, signs and warning devices used to delineate the perimeter of all construction areas, as approved by the Airport Airfield Operations.
- h.** All escorts performed within the Movement Area and/or associated safety areas, shall be provided by an authorized Escort.
- i.** Deliveries are to be strictly controlled (by the Contractor) using personnel specifically acquainted with these rules. The Contractor shall provide properly manned escort vehicles as required to guide and escort all deliveries to the Work Area(s).
- j.** At no time shall personnel, vehicles or equipment be located or enter any of the following areas unless authorized by Airport Operations.
 - 1. Within 250 feet parallel to an active runway centerline (to be indicated on the CSPP and/or SPCD).
 - 2. Within 400 feet parallel to an active runway centerline without equipment and stockpile removal.
 - 3. Within 1,000 feet of the end of active runways (each end to be indicated in the CSPP and/or SPCD)
 - 4. Within 93 feet parallel to an active taxiway centerline without proper approval.
 - 5. Active NAVAID Critical Areas.
 - 6. On the Movement Area and/or associated safety areas during times of inclement weather or unusual events as determined by Airport Operations. During such times all work is to be suspended. All equipment shall be removed to approved staging areas
- k.** Trenches and/or Excavations Trenches and/or excavations shall not be allowed in the following areas without closure or restriction of the adjacent Movement Area:
 - 1. Within 250 feet parallel to a runway centerline.
 - 2. Within 400 feet parallel to a runway centerline, without proper trench and excavation cover.
 - 3. Within 93 feet parallel to a taxiway centerline without proper approval.
 - 4. Within 1,000 feet of the end of a runway.
 - 5. Active NAVAID Critical Areas.
- l.** All stockpiled material(s)/supplies shall be constrained in a manner to prevent movement resulting from aircraft blast or wind conditions. Material(s)/supplies shall not be stored within 500 feet of aircraft turning areas or movement areas. Stockpiled material(s)/supplies shall not exceed 15 feet in height unless the Contractor has complied with all requirements for airspace review and secured approval from Airport Operations. All material(s)/supplies shall be positioned so it will not obstruct the line of sight from the Control Tower to the Movement Area. Marking and lighting shall be in accordance with the requirements contained in Barricade Details Checklist.

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- m.** Stockpile material will not be permitted within 6 feet of an AOA fence.
- n.** Debris, waste, and loose materials shall not be allowed on the Movement Area. If debris and/or loose materials are observed to be on active portions of the Movement Area, the Contractor will be responsible for correcting the discrepancy immediately. At the direction of Airport Operations, debris problems occurring during construction, NOT corrected by the Contractor in a timely manner, will be corrected by the Airport at the Contractor's expense. The Contractor is responsible for controlling dust problems resulting from construction and clean-up processes, as defined by Airport Operations or the Fort Lauderdale Executive Airport Engineering Division, resulting from construction and clean up processes.

102-3.7 CONSTRUCTION SITE ACCESS AND HAUL ROADS.

The Contractor will not be permitted to use any access or haul roads other than those designated on the Contract Drawings. The Contractor shall submit specific proposed ingress and egress routes associated with specific construction activities to the City for evaluation and approval prior to commencing construction activities. Aircraft Rescue and Fire Fighting (ARFF) right-of-way on access roads, haul roads, taxiways, and runways shall not be impeded at any time.

102-3.8 CONSTRUCTION NEAR NAVIGATIONAL AIDS.

Construction materials and equipment shall not be placed or parked where they may interfere with the line-of-sight of the Air Traffic Control Tower (ATCT) and navigational aids in operation. The City shall determine if any materials or equipment will cause any type of interference.

102-3.9 FINES

Contractor will be required to pay fines assessed by or to the Fort Lauderdale Executive Airport for the following:

- a.** Environmental penalties or fines resulting from non-compliance with local, state or federal regulations or requirements.
- b.** FXE, FAA or TSA fines for airport security violations.
- c.** FXE or FAA fines for runway incursions defined as "any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft."
- d.** FXE or FAA fines for operating on an active taxiway without proper clearance.

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METHOD OF MEASUREMENT

- 102-4.1** Measurement for payment shall be the work under this Section completed and accepted in accordance with the Plans and these Specifications airport safety and maintenance of air operations area traffic requirements. Including but not limited to the completed and accepted Safety Plan Compliance Document.
- 102-4.3** Measurement of temporary fences for owl/tortoise nests for payment shall be the number of fences completed and accepted in accordance with the Plans and these Specifications.

BASIS OF PAYMENT

102-5.1 Payment for the work measured as described shall be made at the contract lump sum price bid for airport safety and maintenance of traffic, which prices and payments shall be full compensation for the work described in this section. Including but not limited to the completion and acceptance of the Safety Plan Compliance Document. Forty percent of the amount bid will be paid with the first estimate after the item is completely furnished and operational to the City's satisfaction. The remaining sixty percent will be prorated and paid with each application for payment based on the percent of contract completion. ***All barricades and their related costs shall be covered under the Airport Safety and MOT Pay Item.***

102-5.2 Payment for temporary fences for owl/tortoise nests shall be made at the contract price per each fence, which prices and payments shall be full compensation for furnishing all materials, equipment, labor, processes, tools, and incidental costs required to complete the work under this item.

Payment will be made under:

- | | |
|----------------|--|
| Item S-102-5.1 | Airport Safety and Maintenance of Traffic - per lump sum |
| Item S-102-5.2 | Temporary Fence for Owl/Tortoise Nests – per each |

END OF ITEM S-102

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ITEM S-103 PROJECT SURVEY AND STAKEOUT**DESCRIPTION**

103-1.1 GENERAL. Under this item, the Contractor shall do all necessary surveying and project stakeout required to construct all elements of the Project as shown on the Contract Drawings and specified in the Specifications. This shall include but not be limited to stakeout, layout and elevations for pavements, structures, forms and appurtenances as shown and required, consistent with the current practices and shall be performed by a State of Florida licensed professional land surveyor. The stakeout survey shall proceed immediately following the Notice to Proceed or as soon as authorized by the Airport Staff in accordance with the phasing of the construction and shall be expeditiously progressed to completion in a manner and at a rate satisfactory of the City. The Contractor shall keep the Resident Project Representative (RPR) fully informed as to the progress of the stakeout survey.

All survey work shall be provided under the direction of a State of Florida licensed professional land surveyor.

MATERIALS

103-2.1 All instruments, equipment, stakes and any other material necessary to perform the work satisfactorily shall be provided by the Contractor. It shall be the Contractor's responsibility to maintain these stakes in their proper position and location at all times.

CONSTRUCTION METHODS

103-3.1 The Contractor shall trim trees, brush, roots and other interfering objects from survey lines in advance of all survey work to permit accurate and unimpeded work by his stakeout survey crews.

The exact position of all work shall be established from control points, baseline transit points or other points of similar nature which are shown on the Contract Drawings and/or modified by the Engineer. Prior to any layout of works to be constructed, the Contractor shall verify the location and accuracy of all control points provided in the plans. Any error, apparent discrepancy or absence in or of data shown or required for accurately accomplishing the stakeout survey shall be referred to the RPR and Engineer for interpretation or furnishing when such is observed or required.

The Contractor shall place two offset stakes or references at each centerline full and half station and at such intermediate locations as the RPR may direct. From computations and measurements made by the Contractor, these stakes shall be clearly and legibly marked with the correct centerline full and half station number, offset and cut or fill so as to permit the establishment of the exact centerline location and elevation during construction. If markings become faded or blurred for any reason, the markings shall be restored by the Contractor at the request of the RPR. He shall locate and place all cut, fill, slope, fine grade or other stakes and points, as the engineer may direct, for the proper progress of the work. All control points shall be properly guarded and flagged for easy identification.

Drainage structures shall be staked out by the Contractor at the locations and elevations shown on the Contract Drawings or specified by the Engineer through the RPR.

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Reference points, baselines, stakes and benchmarks for stockpiles shall be established by the Contractor.

The Contractor shall be responsible for the accuracy of his work and shall maintain all reference points, stakes, etc., throughout the life of the Contract. Damaged or destroyed points, benchmarks or stakes, or any reference points made inaccessible by the progress of the construction, shall be replaced or transferred by the Contractor. Any of the above points which may be destroyed or damaged shall be transferred by the Contractor before they are damaged or destroyed. All control points shall be referenced by ties to acceptable objects and recorded. Any alterations or revisions in the ties shall be so noted and the information furnished to the RPR immediately. All stakeout survey work shall be referenced to the centerlines shown on the Contract Drawings. All computations necessary to establish the exact position of the work from control points shall be made and preserved by the Contractor. All computations, survey notes and other records shall be made available to the RPR upon request and shall become the property of the City.

The Contractor shall furnish, at his expense, all horizontal and vertical control, all staking and layout of construction work called for on the plans. The RPR, Engineer, and City shall not be responsible for such work. However, the City and Engineer reserve the right to check all said lines, grades, and measurements with their appointed surveyor. Should the City's surveyor detect errors in said lines, grades, and measurements, the contractor shall pay for all said surveying costs and subsequent surveying costs performed to verify correction of errors found in said lines, grades and measurements. Definition of an error shall be a discrepancy of $\frac{1}{4}$ " or more. In the case of a discrepancy between the technical specifications and this defined tolerance, the more severe tolerance shall govern.

During the progress of the construction work, the Contractor will be required to furnish all of the surveying and stakeout incidental to the proper location by line and grade for each phase of the work. For paving and any other operation requiring extreme accuracy, the Contractor will re-stake with pins or other acceptable hubs located directly adjacent to the work at a spacing directed by the RPR.

Any existing stakes, iron pins, survey monuments or other markers defining property lines which may be disturbed during construction shall be properly tied into fixed reference points before being disturbed and accurately reset in their proper position upon completion of the work.

Just prior to completion of the Contract, the Contractor shall reestablish, if necessary, and retie all control points as permanently as possible and to the satisfaction of the RPR.

103-3.2 AS-BUILT SURVEY. Upon completion of the work, after Substantial Completion and before Final Acceptance, the Contractor shall supply to the RPR a complete as-built survey of the entire project site including drainage structures and utilities. All survey points, including horizontal and vertical control, property corners, section corner and reference (hereinafter referred to as "survey point") shall be clearly marked and referenced prior to construction. These survey points must be sufficiently referenced so that they can be reestablished after construction if they are disturbed. All survey data shall be state plane coordinates, NAD 83 datum and NAD 88.

This as-built survey will be a complete topographic and physical features survey of the entire project site surrounded by the limits of construction plus and additional 10' beyond the limits of construction in all directions. Elevations shall be obtained on all rigid pavement joint intersections and ends. If any work is done outside the limits of construction for any reason, this limit of survey will be

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increased to include this area plus 25'. This survey shall be certified by a Florida Licensed Professional Land Surveyor as meeting the minimum Technical Standards for topographic surveys as set forth in chapter 21HH-6, Florida Administrative Code. The survey data must be supplied as a signed and sealed drawing (22" x 34" maximum size) at a minimum scale of 1"=50' and be electronically submitted in AutoCad on CD-ROM media. Signed and sealed copies of all field notes, sketches and calculations must be submitted concurrently with the as-built survey. Larger scale details shall be provided to clarify any complicated or complex areas. A separate point database file shall be electronically submitted in TXT or ASCII format, with each point on a single row with comma delimited columns with data ordered as follows: point number, northing, easting, elevation, description.

The as-built survey is to be supplied to the RPR for review and approval not more than thirty (30) calendar days after substantial completion for the project has been given. If the acceptable as-built survey is not supplied within the required time, the City reserves the right to perform the required survey and bill the Contractor for this work.

The as-built survey shall include all information needed to complete all project permit (i.e. SWFWMD, etc ...) as required by the permits and/or agencies standard requirements. A minimum of six (6) signed and sealed copies of the as-built survey will be supplied to the Engineer and RPR.

METHOD OF MEASUREMENT

103-4.1 Payment will be made at the lump sum price bid for this item.

BASIS OF PAYMENT

103-5.1 The lump sum price bid shall include the cost of furnishing all labor, equipment, instruments and all other material necessary to satisfactorily complete the Project stakeout and as built survey. Seventy-five percent (75%) of this item will be paid based on the percentage of work paid for a month vs. the total project cost. The remaining twenty-five percent (25%) will be paid after the as-built survey has been given the RPR and approved.

This item will not be increased or decreased base on changes to the total contract amount.

Payment will be made under:

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|----------------|--|
| Item S-103-5.1 | Project Survey and Stakeout – per Lump Sum |
|----------------|--|

END OF ITEM S-103

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ITEM S-180 BLAST BARRIER FOR PISTON AIRCRAFT**DESCRIPTION**

180-1.1 This Section includes the design, fabrication, erection, and certification for a complete Deflector (hereafter referred to as JBD).

180-1.2 Design Criteria.

- a. **Aircraft.** This JBD shall be designed specifically for piston aircraft (TDG-1A / ADG I) operating at high power settings. The JBD shall be rated for 140 mph (minimum) propellor wash velocity, converted to pressure using standard day conditions. The JBD shall be designed to allow the operation of specified aircraft, with no aircraft tail closer than 20 feet from the JBD leading edge.
- b. **JBD Description.** The JBD deflecting surface shall be a curved (see Note 1), corrugated type with corrugations running in the horizontal direction (see Note 2). Deflecting surfaces may not use concrete or perforated (or expanded) metal (see Notes 3 and 4). Deflecting surfaces shall be rigidly supported by bolted structural steel frame assemblies spaced at 6' (maximum) centers. Deflecting surface panels shall be supported by single-piece, curved steel members with a continuous radius (see Note 5). Welds at joints subjected to tension and/or vibration shall not be used. The JBD shall be LYNNCO Type G8R-6 or an approved equal. Any alternatives shall strictly comply with all of Section 180-3.11 (Quality Assurance) conditions to qualify as an approved equal.
 1. Vertical, or nearly vertical, blast fences are not recommended due to poor aerodynamic deflection characteristics.
 2. Deflecting surfaces composed of flat metal or corrugations of lower section modulus than specified (see Section 180-2.2) shall not be used due to potential 'oil-canning' effects, which may lead to early fatigue failure.
 3. Blast deflectors composed of concrete shall not be used due to the potential for surface spalling, which may lead to Foreign Object Debris/Damage (FOD) hazards.
 4. Perforated or expanded metal (a.k.a. mesh) deflectors shall not be used since the passage of high-velocity propellor blast/engine exhaust through the deflector is not conducive to full protection immediately behind the mesh, especially at lower elevations. In the case of expanded metal, there is potential for entrained particulate (sand, stone, etc.) to pass through the deflector near ground level and become airborne.
 5. Segmented, or faceted, blast surfaces designed to mimic a singular curved surface are not recommended due to poor aerodynamic performance and the potential for induced turbulence and vibration at joints.

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- c. **JBD Performance.** The JBD shall reduce blast velocities at ground level behind the JBD to a maximum of 35 mph. The blast envelope shall be deflected upward at a minimum angle of 50° under no wind conditions.
- d. **Layout.** As shown on Drawing S02.
- e. **Height.** Nominal 8'.
- f. **Foundation.** The foundation design shall be shallow slab (raft/mat) type with shear key(s), as necessary, designed to withstand the anchor loads provided by the JBD manufacturer and taking into consideration the minimum specified anchor bolt clearances. The foundation shall be constructed as a single-plane surface with no breaks in grade unless otherwise arranged with the JBD manufacturer.
- g. **Connections.** For ease of assembly and to minimize construction time on the active airfield, all field connections shall be bolted. Field-welding is not permitted. The design of the structure shall maintain a reasonable degree of modularity should components require future repair or replacement.
- h. **FOD Considerations.** Fastener assemblies used in the construction of the JBD shall include an adequate locking mechanism(s) to prevent from working loose during continued, the normal use of the structure (subject to JBD manufacturer maintenance guidelines).
- i. **Loading.** The JBD shall be designed to withstand propellor wash velocities from aircraft specified in Section 180-1.2. Engine exhaust velocity shall be converted into pressure using standard day conditions and shall be applied normally to all deflecting surfaces. Code-level wind conditions per the 2020 Florida Building Code (2020 FBC) shall also be assessed to identify governing design criteria for all JBD structural components.

MATERIALS

180-2.1 Frames. Structural steel shapes shall consist of ASTM A36 (minimum strength) steel and shall be cut, rolled, and punched, as required. All field connections shall be bolted (no field-welding permitted). After shop fabrication, all individual structural steel members shall be hot-dip galvanized to a minimum of 2 oz/ft² per ASTM A123.

180-2.2 Deflecting Surface Sheets. Corrugated steel sheets shall be formed from 16-gauge (minimum) ASTM A924 sheet steel with 2 oz/ft² hot-dip galvanized coating per ASTM A653. Section modulus of formed sheets shall be a minimum of 0.196 in³/ft and shall be attached to frames with 3/8"-diameter bolts using half oval washers.

180-2.3 Fastener Assemblies. Fastener assemblies shall include adequate locking properties and shall be designed to withstand direct high power setting exhaust blast. Where applicable, the following shall be used as a minimum for strength, locking, and anti-corrosion characteristics:

| Fastener Component | Bolt Nom. Diameter $\geq \frac{1}{2}"$ | Bolt Nom. Diameter $< \frac{1}{2}"$ |
|--------------------|--|-------------------------------------|
| Bolts: | ASTM A449 or SAE J429 Grade 5 | ASTM F593G |

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| Fastener Component | Bolt Nom. Diameter $\geq \frac{1}{2}$ " | Bolt Nom. Diameter $< \frac{1}{2}$ " |
|---|--|--------------------------------------|
| Flat Washers: | ASTM F436 (Where Applicable) | 316 Stainless |
| Lock Washers: | ASME B18.21.1 (Where Applicable)* | N/A |
| Nuts: | ASTM A563* | ASTM F594G (Nylon-Insert Locking) |
| Finish: | ASTM A153 or ASTM F2329 | ASTM A380 (Stainless Steel) |
| Half Oval Washers: | ASTM A36 steel, hot-dip galvanized per ASTM A123 to 2 oz/ft2 | |
| *Nuts and/or washers shall incorporate locking components to withstand vibrations induced by direct propellor/jet blast, thus preventing FOD; configuration shall be determined by the supplier using proven methods. Technical details of the locking component shall be submitted within item 180-3.10.b.3 of these specifications. | | |

180-2.4 Anchor Bolts. Load capacities for post-installed anchors in concrete shall be based on testing in accordance with ACI 355.2, ACI 355.4, or ASTM E488. Approved anchors are threaded rod anchors set in ICC-approved epoxy. Anchors shall be supplied by the JBD manufacturer and shall not be installed in concrete that has been cured for less than 7 days.

180-2.5 Galvanizing Repair Paint. Re-galvanize damaged areas on hot-dip galvanized steel using high-zinc-content paint—greater than 93 percent pure zinc by weight—complying with Mil-P-21035 and Mil-P-26915.

CONSTRUCTION METHODS

180-3.1 Fabrication, General.

- Produce metal fabrications from materials of approved size, thickness, and shapes as required. Work to dimensions indicated on approved shop drawings using proven details of fabrication and support.
- All fabrications shall be produced with precise angles and straight, sharp edges.
- Material shall be cut, sheared, drilled, and/or punched cleanly and accurately. Remove all burrs from edges and holes.
- Remove any remaining sharp or rough areas on exposed surfaces before galvanizing.

180-3.2 Product marking. JBD manufacturer shall provide signage indicating manufacturer name, model number, power rating, usage restrictions, and project information/identifier. Sign(s) shall be securely-bolted to the back of the completed structure.

180-3.3 Site Condition. The JBD manufacturer shall inspect the site before beginning work and notify the Owner of any deficiencies. Installation may not proceed until unsatisfactory conditions have been corrected.

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- a. Store all JBD materials in approved areas, protected from the elements, and in a manner that prevents any damage, distortion, or deterioration. Keep deflecting surface sheets and steel members off ground using pallets, dunnage, platforms, or similar supports. Do not expose nested or stacked materials to water or moisture.
- b. Surfaces showing iron stain or red rust shall be retouched or re-galvanized to the satisfaction of the contracting officer. See Section 180-2.5 (Structure) for details on the galvanizing repair paint.

180-3.5 Erection

- a. The JBD manufacturer shall observe and supervise the construction of the JBD and, upon satisfactory completion, the JBD manufacturer shall issue the performance guarantee/warranty (see Section 180-3.10.c).
- b. Install all post-installed concrete anchors per the anchor manufacturer's written instructions. Use steel templates during drilling/setting of anchors to ensure accurate positions.
- c. Set steel frames accurately at the locations provided on approved shop drawings, and per applicable American Institute of Steel Construction (AISC) standards.
- d. Provide temporary guys and/or braces, as required, to support structural elements during erection.
- e. Tighten all fasteners to the torques specified by the JBD manufacturer.
- f. Field-executed thermal cutting or welding is not permitted.
- g. Touch up any damaged galvanized surfaces with galvanizing repair paint (see Section 180-2.5 for galvanizing repair paint product requirements). Follow the paint manufacturer's written instructions for surface preparation and application.

180-3.6 Permits. The general contractor shall be responsible for obtaining approval for the design of the JBD structure and associated foundation, and any required building permits.

180-3.7 Inspection.

- a. The JBD manufacturer and the Owner, or designated representatives thereof, shall visually inspect the completed installation to ensure that all work has been completed acceptably. Special care shall be given to the inspection of the JBD for loose material and missing fasteners.
- b. Once any noted issues are corrected to the satisfaction of both parties, an acceptance letter or certificate of completion shall be signed by the representatives of the JBD manufacturer and the Owner who participates in the inspection. Final acceptance/certification by the JBD manufacturer and Owner shall be obtained to validate the performance guarantee/warranty for the JBD structure.

180-3.8 Cleanup.

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- a. Following completion of construction and related inspections, and before any aircraft operation, the JBD manufacturer representative(s) shall remove all associated construction materials, equipment, and debris from the job site.
- b. Before aircraft operation, the Owner is responsible for thoroughly sweeping the surrounding areas and inspecting for FOD.

180-3.9 Testing. Proof testing is not required.**180-3.10 Submittals**

- a. **Quality Assurance Documents.** The JBD manufacturer shall submit all quality assurance requirements listed in Sections 180-3.11b and 180-3.11c (Quality Assurance) for approval.
- b. Upon execution of a contract, the approved JBD manufacturer shall submit the following:
 1. **Shop Drawings.** Provide assembly and installation drawings detailing the location and overall dimensional information, materials, and finish details of the JBD. Drawings shall include details of the structural frame members and major assembly/subassembly details for the JBD structure, including plans, elevations, and sections. Show anchorage and accessory items. Drawings shall be stamped by a qualified Professional Engineer licensed in the State of Florida.
 2. **Foundation Design Criteria.** JBD manufacturer shall furnish the anchor loads and locations, as well as all miscellaneous requirements for foundation design.
 3. **Structural Calculations.** Provide structural design calculations for the JBD structure, including structural connections, deflecting surfaces, and anchors, prepared and stamped by a qualified Professional Engineer licensed in the State of Florida or certified by the Structural Engineering Certification Board. Calculations shall be submitted for each major frame system and shall comply with current IBC standards.
 4. **Professional Engineer Qualifications.** Documentation of experience per Section 180-3.11b (Quality Assurance) shall be provided with the submittal package.
- c. At project closeout, the approved JBD manufacturer shall submit the following:
 1. **Mill Certificates.** Provide mill certificates for all steel used in the manufacturing of the JBD.
 2. **Performance Guarantee/Warranty Certificate.** Provide a written copy of the manufacturer's guarantee or warranty certifying the workmanship, materials, installation, and performance of the JBD for one (1) year. See Section 180-3.5 (Erection) for JBD manufacturer supervision requirements.
 3. **As-Built Drawings.** Submit as-built drawings of completed work per the requirements of the specification.

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4. **Operation and Maintenance Manual.** Provide an operation and maintenance manual for the JBD and associated components, including inspection intervals and guidelines.

180-3.11 Quality Assurance.

- a. **Single-Source Responsibility.** The JBD structural members, fasteners, deflecting surfaces, and anchorage shall be procured from a single source responsible for design, manufacture, supply, and issuance of performance guarantee/warranty certificate by Section 180-3.10c (Submittals) of this specification.
- b. **Professional Engineer Qualifications.** Drawings and calculations shall be stamped by a Professional Engineer with experience of at least five (5) past blast deflector projects rated for high power operations.
- c. **Alternate Manufacturers.** To be approved as an alternate manufacturer, the following information shall be submitted to and approved by the Owner before submitting a bid (see Section 180-3.10a).
 1. Results of full-scale field proof tests in which high-power JBDs were subjected to aircraft operating at full power settings. Computer simulations are not an acceptable alternative to full-scale field tests.
 2. Results of full-scale smoke dispersion tests demonstrate that smoke and gases are deflected in an upward direction, with evidence of no smoke dispersal behind the deflector. Video footage and test reports shall be provided.
 3. Evidence of satisfactory operation of at least five (5) installations of the high-power setting JBDs, each with at least five (5) years of actual field service of continued use with similar aircraft, power settings, and engines.
 4. Detailed structural design analysis of the proposed JBD showing loads and stresses in structural members, bolted connections, deflecting surfaces, and anchorage, using the worst-case aircraft velocity profiles as the calculated pressure for load calculations. Structural calculations shall comply with current IBC standards.
 5. Design drawings of the proposed JBD demonstrating that the deflector meets all design and material specifications listed in Parts 180-2 and 180-3 of this specification.
 6. Evidence that the JBD designer/manufacturer is ISO 9001:2015 registered.
 7. Evidence that the JBD designer/manufacturer has a combined commercial general liability and excess coverage of \$10 Million (minimum) with products/completed operations coverage. The JBD designer/manufacturer shall also provide evidence of professional liability coverage of \$1 Million (minimum).

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METHOD OF MEASUREMENT

180-4.1 Blast Fence. The steel portion of the blast fence cost shall be considered a lump sum cost, including but not limited to the cost of material, engineering, delivery, field supervision, and installation.

180-4.2 Foundation. The method of measurement for the reinforced concrete foundation of the blast fence shall be covered in P-610.

BASIS OF PAYMENT

180-5.1 Blast Fence. Payment shall be made at the contract unit price per lump sum for the blast fence, which price shall be full compensation for all material, engineering, delivery, and field supervision of the Blast Fence.

Item S-180-5.1 – Blast Fence – per Lump Sum

180-5.2 Foundation. See P-610.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|---|
| ASTM A123 | Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products |
| ASTM A36 | Standard Specification for Carbon Structural Steel |
| ASTM A380 | Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems |
| ASTM A449 | Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use |
| ASTM A513 | Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing |
| ASTM A563 | Standard Specification for Carbon and Alloy Steel Nuts (Inch and Metric) |
| ASTM A653 | Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process |
| ASTM A924 | Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process |
| ASTM E488 | Standard Test Methods for Strength of Anchors in Concrete Elements |
| ASTM F2329 | Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded |

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| | |
|-----------|--|
| ASTM F436 | Standard Specification for Hardened Steel Washers Inch and Metric Dimensions |
| ASTM F593 | Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs |
| ASTM F594 | Standard Specification for Stainless Steel Nuts |

American Concrete Institute (ACI)

| | |
|-----------|---|
| ACI 355.2 | Qualification of Post-Installed Mechanical Anchors in Concrete |
| ACI 355.4 | Qualification of Post-Installed Adhesive Anchors in Concrete and Commentary |

Society of Automotive Engineers (SAE)

| | |
|----------|--|
| SAE J429 | Mechanical and Material Requirements for Externally Threaded Fasteners |
|----------|--|

American Society of Mechanical Engineers (ASME)

| | |
|---------------|---|
| ASME B18.21.1 | Washers: Helical Spring-Lock, Tooth Lock, and Plain Washers (Inch Series) |
|---------------|---|

Military Specification (MIL)

| | |
|-------------|--|
| MIL-P-21035 | Paint High Zinc Dust Content, Galvanizing Repair |
| MIL-P-26915 | Primer Coating, For Steel Surfaces |

International Organization for Standardization (ISO)

| | |
|---------------|---|
| ISO 9001:2015 | Quality Management Systems - Requirements |
|---------------|---|

END ITEM S-180

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ITEM S-205 TEMPORARY ACCESS ROAD**DESCRIPTION**

205-1.1 This item consists of a temporary access road composed of lime rock base constructed on a compacted subgrade in accordance with these specifications and in conformity to the dimensions and typical cross sections shown on the plans. Cost shall include establishing, maintaining, and restoring to the existing condition, including sodding, of the access road.

MATERIALS

205-2.1 AGGREGATE. Aggregates for lime rock base will conform with Technical Specification P-211 *Lime Rock Base Course*.

Gradation Requirements. The gradation will conform with Technical Specification P-211 *Lime Rock Base Course*.

CONSTRUCTION METHODS

205-3.1 PREPARING UNDERLYING SUBGRADE. The underlying subgrade shall be checked and accepted by the Engineer before placing and spreading operations are started. Any ruts or soft yielding places caused by improper drainage conditions, hauling, or any other cause shall be corrected at the Contractor's expense before the surface is placed thereon. The existing subgrade shall be graded to conform to the typical section in the plans and compacted to 98% of its maximum dry density (ASTM D1557).

205-3.2 PLACING. The lime rock material shall be obtained offsite and placed in accordance with specification P-211. The maximum depth of a compacted layer will be in accordance with the plans.

205-3.3 COMPACTION. Immediately upon completion of the spreading operations, the material shall be thoroughly compacted. The number, type, and weight of rollers shall be sufficient to compact the material into a dense, unyielding, uniform mass having the specified density.

205-3.4 FINISHING. The surface of the road shall be finished by blading or with automated equipment especially designed for this purpose.

205-3.5 SURFACE TOLERANCES. The finished surface shall not vary more than 3/8 inch when tested with a 16-foot straightedge applied parallel with or at right angles to the centerline. Any deviation in excess of this amount shall be corrected by the Contractor at the Contractor's expense.

205-3.6 THICKNESS CONTROL. The completed thickness of the road will shall be within 1/2 inch of the design thickness. Where the thickness is deficient by more than 1/2 inch, the Contractor shall correct such areas at no additional cost by excavating to the required depth and replacing with new material. Additional test holes may be required to identify the limits of deficient areas.

205-3.7 MAINTENANCE. The road will be maintained in a condition that will meet all

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specification requirements until the work is accepted. Equipment used in the construction of an adjoining section may be routed over completed portions of the base course, provided no damage results and provided that the equipment is routed over the full width of the base course to avoid rutting or uneven compaction.

METHOD OF MEASUREMENT

205-4.1 The quantity of Access Road will not be measured in this project.

BASIS OF PAYMENT

205-5.1 No payment will be made. Cost is incidental to C-105 Mobilization.

MATERIALS AND TESTING REQUIREMENTS

| | |
|-------------|--|
| ASTM D 698 | Test for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-pound (2.49 kg) Rammer and 12 in (305 mm) Drop |
| ASTM D 1556 | Test for Density of Soil In Place by the Sand-Cone Method |
| ASTM D 1557 | Test for Laboratory Compaction Characteristics of Soil Using Modified Effort |
| ASTM D 2167 | Test for Density and Unit Weight of Soil In Place by the Rubber Balloon Method. |
| ASTM D 6938 | In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods |
| ASTM D 3665 | ASTM D 3665 Random Sampling of Construction Materials |

END OF ITEM S-205

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ITEM P-101 PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, *hauling and disposal and stockpiling of demolished material* and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

All material removed from the work areas are property of the airport. The contractor is to coordinate with the airport where to stockpile the removed materials on site or in an off site location as requested by the owner. The hauling and stockpiling process is to be incidental to the unit price of the removal of the material and is to be conducted at no additional cost to the owner.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

~~a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of one cubic foot. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.~~

~~The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.~~

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the *depths at the locations shown on the plans. The underlying material adjacent to the edge of and under the existing pavement which is to remain in place shall be protected from damage*

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or disturbance during removal operations and until placement of new pavement or shaped as shown on the drawings or as directed by the RPR. Any material under the portion of the pavement to remain in place, which is disturbed or loses its compaction shall be carefully removed and replaced with P-610 Structural Portland Cement Concrete at no additional cost to the Owner. The Contractor's removal operation shall not cause damage to cables, utility ducts, pipelines, or drainage structures under the pavement. Any damage shall be repaired at the Contractor's expense. full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be wasted on the airport site it shall be broken to a maximum size of 3 inches(3mm).

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

d. General. *In all cases of full depth pavement removal, the Contractor shall protect and preserve the existing underdrain pipes and clean outs that are to remain. There shall be no additional cost for protecting and preserving the existing underdrain system to remain.*

e. *In areas that call for Asphalt Pavement Surface Removal, the asphalt shall be removed from the existing base while preserving the existing base. Any damage to the base that causes the base to be removed and replaced will be corrected at no additional cost to the Owner.*

f. Concrete foundation removal is to include the removal of all rebar and other reinforcement elements. These items are to be considered incidental to the Concrete Removal Pay Item.

g. Asphalt Removal and Partial Limerock Removal will remove the asphalt from the base and then a variable depth of base as described in the plans. If the Contractor removes more base than specified in the plans, the embankment used to bring the area to grade is to be installed at no additional cost to the Owner.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25-mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6-mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3-mm), not to exceed 1/4 inch (6-mm). Any excess joint or crack sealer shall be removed from the pavement surface. ***There will be no separate payment for crack sealant, all crack sealant will be incidental to the Pavement Milling Pay Item.***

101-3.3 Removal of Foreign Substances/contaminates prior to overlay or remarking . Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, ***refer to Item P-620 for paint removal at least 90% of paint***, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

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High-pressure water may be used. ~~If chemicals are used, they shall comply with the state's environmental protection regulations.~~ Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of **off site** in areas indicated in this specification ~~or shown on the plans.~~

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

~~a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.~~

b. Asphalt pavement repair. The Contractor shall repair all spalled *asphalt* concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense. ***All existing utility structures within the milling area shall be preserved and protected throughout construction. Any damage to the exiting utility structures shall be repaired at the cost of the Contractor. Where the limits of milled pavements abut pavement to remain, the contractor shall neatly sawcut, vertically to the specified depth of overlay in accordance with the details on the plans. In areas that become overmilled due to poor quality control, the Contractor fill with P-401 at no additional cost to the Owner.***

Preparation for temporary asphalt transition wedges between phases and their subsequent removal are to be paid for by the Max 2" Milling Pay Item.

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a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. ~~The RPR shall layout the area to be milled with a straightedge in increments of 1 foot (30 cm) widths. The area to be milled shall cover only the failed area.~~ Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet (~~[-2-] m~~) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (~~+0 mm and -6mm~~) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of off the airport.

At the completion of milling, the RPR shall review the milled surface for scabbing or excessive smoothness. Such areas shall be scarified or re-mill to a slightly deeper depth to produce a sound and textured surface at no additional expense.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property

d. Crack Sealing The RPR or Engineer will review the milled surface for cracks in need of sealing and provide limits to the contractor to conduct crack sealing as per the Crack Sealing Pay Item

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

~~**101-3.8 Preparation of Joints in Rigid Pavement prior to resealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound,~~

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~~moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.~~

~~**101-3.8.1 Removal of Existing Joint Sealant.** All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

~~**101-3.8.2 Cleaning prior to sealing.** Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface dry prior to installation of sealant.~~

~~**101-3.8.3 Joint sealant.** Joint material and installation will be in accordance with Item P-605-~~

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack.** Widen crack with router random by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant.** Existing sealants will be removed b routing. Following routing ny remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with [Item P-605].~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. **Removal of Existing Pipe Material.** Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557 D698.

b. **Removal of Inlets/Manholes.** Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D1557, when outside of paved areas must be compacted to 95% of ASTM D698.

101-3.9.3 Blast Fence Removal – The contractor shall remove the existing Blast Fence from its foundation along with all elements of the blast fence included but not limited to bolts, screws and supports. All pieces should be preserved and protected for potential salvaging for future work. The Materials of the Blast Fence are property of the airport and cannot be removed from the airport without permission.

Method of Measurement

~~[**101-4.1 Lump sum.** No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items.]~~

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101-4.1 Pavement removal. The unit of measurement for **full depth** pavement removal shall be the number of square yards (~~square meters~~) removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

101-4.2 Joint and crack repair. The unit of measurement for joint and crack repair shall be the linear foot (~~meter~~) of joint **or crack**.

101-4.3 Removal of Foreign Substances/contaminates. The unit of measurement for foreign Substances/contaminates removal shall be the square foot (~~meter~~).

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

101-4.6 Cold milling. The unit of measure for cold milling shall be **specified depth** inches of milling per square yard (~~square meter~~). The location and average depth of the cold milling shall be as shown on the plans **and confirmed in the field by the RPR prior to the work beginning**. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling. **At the completion of milling, the RPR and Engineer shall review the milled surface for scabbing or excessive smoothness. Such areas shall be re-mill to a slightly deeper depth to produce a sound and textured surface at no additional expense.**

101-4.7 Removal of Pipe Material and other Buried Structures. Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item. **Full depth pavement removal thicknesses shown on the plans range from 10" to 24". Actual thickness may vary. The Contractor shall account for varying full depths in the unit cost of the bid. No additional compensation shall be made to the Contractor for full depth pavement removal for pavements having thicknesses greater than shown on the plans. Electrical cans and conduit (with or without encasement) within the limits of full depth pavement removal shall be considered incidental. Pavement tie-ins as shown on the contract drawings are considered incidental to full depth pavement removal.**

101-5.2 Crack repair. Payment shall be made at contract unit price per linear foot of crack repair. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

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101-5.3 Bituminous Pavement Cold Milling. *Payment shall be made at contract unit price per square yard of bituminous pavement milling. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item including off-site disposal of materials.*

An As-Built survey taken by a Professionally Licensed Surveyor of the milled surface must be provided after the milling is completed to receive payment for the milling.

The milling required for the installation and removal of temporary asphalt transitions ramps shall not be measured separately but shall be considered incidental to the overall paving operation.

101-5.4 Sawcutting. *All sawcutting alongside areas to be milled or fully removed is to be considered incidental to those pay items. There will be no additional payment for sawcutting.*

| | |
|-----------------------|---|
| Item P-101-5.1 | Full Depth Asphalt Pavement Removal – per Square Yard |
| Item P-101-5.2 | Bituminous Pavement Milling (up to 2" deep) – per Square Yard |
| Item P-101-5.3 | Asphalt Pavement Surface Removal – per Square Yard |
| Item P-101-5.4 | Concrete Foundation Removal – per Square Yard |
| Item P-101-5.5 | Asphalt Pavement Removal and Partial Limerock Removal – per Square Yard |
| Item P-101-5.6 | Crack Sealing – per Linear Foot |
| Item P-101-5.7 | Removal, Salvage and Relocation of Non-Electrical Airport Signage – per Each |
| Item P-101-5.8 | Blast Fence Removal – per Lump Sum |

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6 Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

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ITEM P-151 CLEARING AND GRUBBING**DESCRIPTION**

151-1.1 This item shall consist of clearing or clearing and grubbing, including the disposal of materials, for all areas within the limits designated on the plans or as required by the Resident Project Representative (RPR).

~~a. Clearing shall consist of the cutting and removal of all trees, stumps, brush, logs, hedges, the removal of fences and other loose or projecting material from the designated areas. The grubbing of stumps and roots will not be required.~~

b. Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures **not identified under P-101**, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the RPR is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing.

~~c. Tree Removal. Tree Removal shall consist of the cutting and removal of isolated single trees or isolated groups of trees, and the grubbing of stumps and roots. The removal of all the trees of this classification shall be in accordance with the requirements for the particular area being cleared.~~

CONSTRUCTION METHODS

151-2.1 General. The areas denoted on the plans to be cleared and grubbed shall be staked on the ground by the Contractor as indicated on the plans.

The removal of existing structures and utilities required to permit orderly progress of work shall be accomplished by local agencies, unless otherwise shown on the plans. Whenever a telephone pole, pipeline, conduit, sewer, roadway, or other utility is encountered and must be removed or relocated, the Contractor shall advise the RPR who will notify the proper local authority or owner to secure prompt action.

151-2.1.1 Disposal. All materials removed by clearing or by clearing and grubbing shall be disposed of outside the Airport's limits at the Contractor's responsibility, except when otherwise directed by the RPR. As far as practicable, waste concrete and masonry shall be placed on slopes of embankments or channels. When embankments are constructed of such material, this material shall be placed in accordance with requirements for formation of embankments. Any broken concrete or masonry that cannot be used in construction and all other materials not considered suitable for use elsewhere, shall be disposed of by the Contractor. In no case, shall any discarded materials be left in windrows or piles adjacent to or within the airport limits. The manner and location of disposal of materials shall be subject to the approval of the RPR and shall not create an unsightly or objectionable view. When the Contractor is required to locate a disposal area outside the airport property limits, the Contractor shall obtain and file with the

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RPR permission in writing from the property owner for the use of private property for this purpose.

151-2.1.2 Blasting. Blasting shall not be allowed.

~~**151-2.2 Clearing.** The Contractor shall clear the staked or indicated area of all materials as indicated on the plans. Trees unavoidably falling outside the specified clearing limits must be cut up, removed, and disposed of in a satisfactory manner. To minimize damage to trees that are to be left standing, trees shall be felled toward the center of the area being cleared. The Contractor shall preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut flush with the original ground surface. The grubbing of stumps and roots will not be required.~~

~~Fences shall be removed and disposed of as directed by the RPR. Fence wire shall be neatly rolled and the wire and posts stored on the airport if they are to be used again, or stored at a location designated by the RPR if the fence is to remain the property of a local owner or authority.~~

151-2.3 Clearing and grubbing. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials as indicated on the plans, shall be removed, except where embankments exceeding 3-1/2 feet (405 cm) in depth will be constructed outside of paved areas. For embankments constructed outside of paved areas, all unsatisfactory materials shall be removed, but sound trees, stumps, and brush can be cut off flush with the original ground and allowed to remain. Tap roots and other projections over 1-1/2 inches (38 mm) in diameter shall be grubbed out to a depth of at least 18 inches (0.5 m) below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials shall be disposed of by removal from the site. The cost of removal is incidental to this item. The remaining or existing foundations, wells, cesspools, and like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet (60 cm) below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor's expense. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes in embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required in Item P-152. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

METHOD OF MEASUREMENT

151-3.1 ~~The quantities of clearing and grubbing as shown by the limits on the plans shall be the number of acres (square meters) or fractions thereof of land specifically cleared and grubbed. No separate measurement for payment shall be made for the quantity of Clearing and Grubbing.~~

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BASIS OF PAYMENT

~~151-4.1~~ Payment shall be made at the contract unit price per acre (square meter) for clearing and grubbing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item. *No payment will be made separately or directly for the Clearing and Grubbing. Cost will be incidental to P-152 Excavation, Subgrade, and Embankment.*

END OF ITEM P-151

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ITEM P-152 EXCAVATION, SUBGRADE, AND EMBANKMENT**DESCRIPTION**

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 *All suitable material taken from excavation areas located on site shall be used in the formation of embankment, subgrade, and for back filling of areas as indicated on the project plans or as directed by the Resident Project Representative (RPR). No suitable material shall be removed from the site without the written approval of the RPR.*

152.1.3 *When the volume of the excavation of suitable material, soil group A-3 or better, exceeds that required to construct the embankments to the grades indicated, the excess shall be stockpiled on the airport in the contractor's staging area or as directed by the RPR at no additional cost. If the volume of excavation is not sufficient for constructing the embankment to the grades indicated from material within the project limits, whether moved by equipment or not, the deficiency shall be supplied from off-site borrow locations supplied by the Contractor.*

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items.

b. Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas ~~designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.~~

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope *outside of paved areas when approved by the RPR, otherwise it shall be removed from the airport at no additional cost* when approved by the RPR.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

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The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of as described above. ~~in waste areas as shown on the plans. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.~~

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (400 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (400 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

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~~**b. Undercutting.** Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be [disposed of at locations shown on the plans.] [disposed off the airport. The cost is incidental to this item.] This excavated material shall be paid for at the contract unit price per cubic yard (per cubic meter) for [_____]. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as [unclassified excavation] [rock excavation].~~

~~**c. Over break.** Over break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over break that the RPR determines as avoidable. Unavoidable over break will be classified as "Unclassified Excavation."~~

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. There are no borrow sources within the boundaries of the airport property. The Contractor shall locate and obtain borrow sources, subject to the approval of the RPR. The Contractor shall notify the RPR at least 15 days prior to beginning the excavation so necessary measurements and tests can be made by the RPR. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 12 inches of subgrade shall be compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

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Payment for materials removed, manipulated, and replaced in order to obtain the required depth of density shall be paid for under Unclassified Excavation or Embankment.

The Contractor shall achieve in-place field densities, for subgrade and embankments outside of areas to be paved, of 85% of maximum dry density as determined by ASTM D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort. In addition, subgrade and embankments outside of areas to be paved shall be firm and unyielding under heavy vehicle traffic as demonstrated by proof-roll with a dual axle vehicle, such as a fully-loaded water truck.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (~~450-mm~~) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (~~300-mm~~) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (~~300-mm~~) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (~~450-mm~~) nor more than 12 inches (~~300-mm~~) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

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The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within $\pm 2\%$ of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The RPR will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698 or D 1557. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the **Contractor for QC** ~~the RPR for~~ every 1,000 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR. ***The RPR will conduct density tests as needed for QA.***

If the material has greater than 30% retained on the 3/4-inch (~~19.0 mm~~) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted per paragraph 152-2.5.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches (~~100 mm~~) which shall be prepared for ***sod in accordance with T-904*** or a seedbed in accordance with ***S-906***.

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin

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in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 12 inches (300 mm) of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet (60 cm) in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 15 ton Proof Roller with tires spaced not more than 32 inches (0.8 m) on-center with tires inflated to 125 psi in the presence of the RPR. Apply a minimum of 50% coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements.

The subgrade under areas to be paved shall be compacted ~~to a depth of 12 inches (300 mm) and to a density of not less than 100 percent of the maximum dry density as determined by ASTM D1557.~~ **to the depths and percentages shown in the compaction schedule noted in the plans. Density will be determined in accordance with ASTM D1557.** The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D1557.

The material to be compacted shall be within $\pm 2\%$ of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the $\frac{3}{4}$ inch (19.0 mm) sieve, follow the methods in ASTM D1557. Tests for moisture content and compaction will be taken at a minimum of 1,000 S.Y. of subgrade. All quality assurance testing shall be done by the RPR.

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The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Density tests will be taken by the **Contractor for QC RPR** ~~for every 1,000 square yards~~ ~~(meters)~~ of completed subgrade. If a nuclear gage is used for density determination, two random readings shall be made for each **2,000 square yards** ~~(meters)~~. **The RPR to conduct density tests for QA as needed.**

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

WARNING! A ductile iron raw watermain is located on the south side of the project – see plans for locations. Vibratory rolling will not be permitted within 10' of this pipe.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any

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portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75-mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

- a. **Smoothness.** The finished surface shall not vary more than +/- 1/2 inch (12-mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.
- b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15-mm) of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to be placed, grade shall not vary more than 0.10 feet (30-mm) from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-2.14 Topsoil. ~~When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations.~~ **Topsoil shall be stripped and stockpiled on site until grading is complete. Topsoil shall be placed prior to sod installation. The sod mat is assumed to be 2 inches thick.** Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the RPR, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further re-handling.

~~Upon completion of grading operations, stockpiled topsoil shall be handled and placed as shown on the plans and as required in Item T-905. Topsoil shall be paid for as provided in Item T-905. No direct payment will be made for topsoil under Item P-152.~~

All work associated with the removal, stockpiling and rehandling of topsoil is considered incidental to Item P-152.

152-2.15 OFFSITE BORROW. *When the amount of suitable on-site excavation is not sufficient to achieve the required embankment for the project, the Contractor will supply the material from offsite borrow sites. When required, off site borrow shall meet the following requirements. The offsite borrow sources will be the Contractor's responsibility to locate and to obtain any environmental permits, hauling fees or other required incidental items to satisfy the requirements of the project. The borrow site may be visited by the RPR and any unsuitable areas or materials marked not be used for the project. The Contractor shall notify the RPR and Engineer, at least 15 days prior to beginning the borrow excavation, so necessary tests can be made. The borrow pit shall have a vertical face available to define the strata to be used. All materials brought to the project as borrow shall meet the following criteria to be accepted:*

| | |
|--------------------------------|----------------------------------|
| Soil Group | A-3 or better |
| % Passing No. 200 Sieve | Less than 20% (By weight) |

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| | |
|-------------------------|---------------------------------|
| Liquid Limit | Less than 20 |
| Plasticity Index | Less than 5 |
| Organic Content | Less than 2% (By weight) |

All materials to be used for the work must have laboratory tests on file with RPR and Engineer meeting these criteria before the material can be brought onto airport property for incorporation into the project.

Any change in the sources or composition of the material will be discussed with the RPR and Engineer and laboratory tests approved prior to any change of materials.

The Contractor will be allowed to remove organic material from the project stripping by sieving or other methods and use it as borrow material assuming it meets the above requirements.

METHOD OF MEASUREMENT

152-3.1 The quantity of unclassified excavation to be paid for shall be the number of cubic yards (cubic meters) measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed. **No payment will be made for material "swelling".**

152-3.2 The quantity of embankment in place shall be the number of cubic yards (cubic meters) measured in its final position. **Measurement shall not include the quantity of materials placed without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed. The Contractor is required to account, when determining project unit bid prices, that some of the existing excavated material will be "lost" during construction or may be unsuitable and will not be available for embankment construction. No payment will be made for material lost in clearing and grubbing, unsuitable material not able to be used, shrinkage of material or other reduction in material quantity.**

152-3.3 Contractor will perform a detailed pre-construction survey with a professionally licensed surveyor before any clearing and grubbing or other work begins, after excavation has been completed, after embankment has been completed, and a post-construction survey once all work is completed and supply them to the RPR and Engineer. Survey will be submitted in digital terrain model (DTM) format. The survey is a requirement to receive payment for unclassified excavation or embankment.

BASIS OF PAYMENT

152-4.1 Unclassified excavation payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for **loading and hauling, soil shrinkage and swelling, rehandling of unclassified excavation, compaction**, furnishing all materials, labor, equipment, tools, **surveying**, and incidentals necessary to complete the item **to the grades and requirements shown on the plans.**

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152-4.2 For embankment, payment shall be made at the contract unit price per cubic yard (~~cubic meter~~). This price shall be full compensation for obtaining and using on-site and off-site sources, loading and hauling from borrow areas, soil shrinkage and swelling, rehandling, compaction, furnishing all materials, labor, equipment, tools, survey, and incidentals necessary to complete the item to the grades and requirements shown on the plans.

152-4.3 For utility soft dig, payment shall be made at the contract price per lump sum. This price shall be full compensation for all elements of the utility soft dig. Contractor must communicate the results of the utility soft dig to the Engineer or RPR to receive payment for Utility Soft Dig. Contractor is to perform up to 50 Utility Soft Digs under this Lump Sum

Payment will be made under:

Item P-152-4.1 Unclassified Excavation – per Cubic Yard

Item P-152-4.2 Embankment – per Cubic Yard

Item P-152-4.3 Utility Soft Dig – per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180 Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))

ASTM D1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2700 kN-m/m³))

ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2 Operational Safety on Airports During Construction Software
Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66 Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

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ITEM P-153 CONTROLLED LOW-STRENGTH MATERIAL (CLSM)

DESCRIPTION

153-1.1 This item shall consist of furnishing, transporting, and placing a controlled low-strength material (CLSM) as flowable backfill in trenches or at other locations shown on the plans or as directed by the Resident Project Representative (RPR).

MATERIALS

153-2.1 Materials.

a. Cement. Cement shall conform to the requirements of ASTM 150 Type I.

b. Fly ash. Fly ash shall conform to ASTM C618, Class C or F.

c. Fine aggregate (sand). Fine aggregate shall conform to the requirements of ASTM C33 except for aggregate gradation. Any aggregate gradation which produces the specified performance characteristics of the CLSM and meets the following requirements, will be accepted.

| Sieve Size | Percent Passing by weight |
|--------------------|---------------------------|
| 3/4 inch (19.0 mm) | 100 |
| No. 200 (75 µm) | 0 - 12 |

d. Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

MIX DESIGN

153-3.1 Proportions. The Contractor shall submit, to the RPR, a mix design including the proportions and source of aggregate, fly ash, cement, water, and approved admixtures. No CLSM mixture shall be produced for payment until the RPR has given written approval of the proportions. The proportions shall be prepared by a laboratory and shall remain in effect for the duration of the project. The proportions shall establish a single percentage or weight for aggregate, fly ash, cement, water, and any admixtures proposed. Laboratory costs are incidental to this item.

a. Compressive strength. CLSM shall be designed to achieve a 28-day compressive strength of 100 to 200 psi (690 to 1379 kPa) when tested in accordance with ASTM D4832, with no significant strength gain after 28 days.

b. Consistency. Design CLSM to achieve a consistency that will produce an approximate 8-inch (200 mm) diameter circular-type spread without segregation. CLSM consistency shall be determined per ASTM D6103.

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CONSTRUCTION METHODS**153-4.1 Placement.**

a. Placement. CLSM may be placed by any reasonable means from the mixing unit into the space to be filled. Agitation is required during transportation and waiting time. Placement shall be performed so structures or pipes are not displaced from their final position and intrusion of CLSM into unwanted areas is avoided. The material shall be brought up uniformly to the fill line shown on the plans or as directed by the RPR. Each placement of CLSM shall be as continuous an operation as possible. If CLSM is placed in more than one lift, the base lift shall be free of surface water and loose foreign material prior to placement of the next lift.

b. Contractor Quality Control. The Contractor shall collect all batch tickets to verify the CLSM delivered to the project conforms to the mix design. The Contractor shall verify daily that the CLSM is consistent with 153-3.1a and 153-3.1b. Adjustments shall be made as necessary to the proportions and materials as needed. The Contractor shall provide all batch tickets to the RPR.

c. Limitations of placement. CLSM shall not be placed on frozen ground. Mixing and placing may begin when the air or ground temperature is at least 35°F (2°C) and rising. Mixing and placement shall stop when the air temperature is 40°F (4°C) and falling or when the anticipated air or ground temperature will be 35°F (2°C) or less in the 24-hour period following proposed placement. At the time of placement, CLSM shall have a temperature of at least 40°F (4°C).

153-4.2 Curing and protection

a. Curing. The air in contact with the CLSM shall be maintained at temperatures above freezing for a minimum of 72 hours. If the CLSM is subjected to temperatures below 32°F (0°C), the material may be rejected by the RPR if damage to the material is observed.

b. Protection. The CLSM shall not be subject to loads and shall remain undisturbed by construction activities for a period of 48 hours or until a compressive strength of 15 psi (105 kPa) is obtained. The Contractor shall be responsible for providing evidence to the RPR that the material has reached the desired strength. Acceptable evidence shall be based upon compressive tests made in accordance with paragraph 153-3.1a.

153-4.3 Quality Assurance (QA) Acceptance. CLSM QA acceptance shall be based upon batch tickets provided by the Contractor to the RPR to confirm that the delivered material conforms to the mix design.

METHOD OF MEASUREMENT**153-5.1 Measurement.**

~~Controlled Low-Strength Material (CLSM) shall be measured by the number of cubic yards (cubic meters) as specified, completed and accepted.~~

The CLSM used for concrete encasement of utility conduit is to be measured in the Electrical Specifications

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BASIS OF PAYMENT**153-6.1 Payment.**

~~Controlled Low Strength Material (CLSM) shall be paid for at the contract unit price per cubic yard (cubic meter). Payment shall be full compensation for all materials, equipment, labor and incidentals required to complete the work as specified. Payment will be made under:~~

~~Item P-153-6.1 Controlled Low Strength Material (CLSM) Per Cubic Yard~~

The CLSM used for concrete encasement of utility conduit is to be paid for in the Electrical Specifications

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|--|
| ASTM C33 | Standard Specification for Concrete Aggregates |
| ASTM C150 | Standard Specification for Portland Cement |
| ASTM C618 | Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete |
| ASTM C595 | Standard Specification for Blended Hydraulic Cements |
| ASTM C1602 | Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete |
| ASTM D4832 | Standard Test Method for Preparation and Testing of Controlled Low-Strength Material (CLSM) Test Cylinders |
| ASTM D6103 | Flow Consistency of Controlled Low Strength Material (CLSM) |

END OF ITEM P-153

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ITEM P-154 SUBBASE COURSE

DESCRIPTION

154-1.1 This item shall consist of a subbase course composed of granular materials constructed on a prepared subgrade or underlying course in accordance with these specifications, and in conformity with the dimensions and typical cross-section shown on the plans.

MATERIALS

154-2.1 Materials. The subbase material shall consist of hard durable particles or fragments of granular aggregates. The material may be obtained from *blending in situ materials with P-211 Lime Rock*, gravel pits, stockpiles, or may be produced from a crushing and screening plant with proper blending. The materials from these sources shall meet the requirements for gradation, quality, and consistency. The material shall be free from vegetative matter, excessive amounts of clay, and other objectionable substances; uniformly blended; and be capable of being compacted into a dense, stable subbase.

The subbase material shall exhibit a California Bearing Ratio (CBR) value of at least 20 when tested in accordance with ASTM D1883. The subbase material shall meet the gradation specified in the table below.

Subbase Gradation Requirements

| Sieve designation | Percentage by weight passing sieves | | Contractor's Final Gradation | Job Control Grading Band Tolerances ¹ (Percent) |
|----------------------|-------------------------------------|--------------------------------|------------------------------|--|
| | Subbase Aggregate | Recycled pavement (RAP or RCO) | | |
| 3 inch (75 mm) | 100 | | | 0 |
| 1 1/2 inch (37.5 mm) | | 100 | | 0 |
| 3/4 inch (19.0 mm) | 70-100 | 70-100 | | ±10 |
| No. 10 (2.00 mm) | 20-100 | 20-100 | | ±10 |
| No. 40 (425 µm) | 5-60 | 5-60 | | ±5 |
| No. 200 (75 µm) | 0-15 | [0-15] | | ±5 |

¹The "Job Control Grading Band Tolerances" shall be applied to "Contractor's Final Gradation" to establish the job control grading band.

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The portion of the material passing the No. 40 (425 μ m) sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than six (6) when tested in accordance with ASTM D4318.

154-2.2 Sampling and testing.

a. Aggregate base materials. Samples shall be taken by the Contractor per ASTM D75 for initial aggregate subbase requirements and gradation. Material shall meet the requirements in paragraphs 154-2.1. The Contractor shall submit to the Resident Project Representative (RPR) certified test results showing that the aggregate meets the Material requirements of this section. Tests shall be representative of the material to be used for the project.

b. Gradation requirements. The Contractor shall take at least [one] aggregate subbase sample per day in the presence of the RPR to check the final gradation. Samples shall be taken from the in-place, un-compacted material at sampling locations determined by the RPR on a random basis per ASTM D3665. Sampling shall be per ASTM D75 and tested per ASTM C136 and ASTM C117. Results shall be furnished to the RPR by the Contractor each day during construction. Material shall meet the requirements in paragraph 154-2.1.

154-2.3 Separation Geotextile. Not used**154-2.4 Geogrid.** Not used.**CONSTRUCTION METHODS**

154-3.1 General. The subbase course shall be placed where designated on the plans or as directed by the RPR. The material shall be shaped and thoroughly compacted within the tolerances specified.

Granular subbases which, due to grain sizes or shapes, are not sufficiently stable to support the construction equipment without movement, shall be mechanically modified to the depth necessary to provide stability as directed by the RPR. The mechanical modification shall include the addition of a fine-grained medium to bind the particles of the subbase material sufficiently to furnish a bearing strength, so the course will not deform under construction equipment traffic.

154-3.2 Preparing underlying course. Prior to constructing the subbase course, clean the underlying course or subgrade of all foreign substances. The surface of the underlying course or subgrade shall meet specified compaction and surface tolerances in accordance with Item P-152. Correct ruts, soft yielding spots in the underlying courses, and subgrade areas having inadequate compaction and/or deviations of the surface from the specified requirements, by loosening and removing soft or unsatisfactory material, adding approved material, reshaping to line and grade, and recompacting to specified density requirements. For cohesionless underlying courses or subgrades containing sands or gravels, as defined in ASTM D2487, the surface shall be stabilized prior to placement of the overlying course by mixing the overlying course material into the underlying course, and compacting by approved methods. The stabilized material shall be considered as part of the underlying course and shall meet all requirements for the underlying course. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained in a satisfactory condition until the overlying course is placed. The underlying course shall be checked and accepted by the RPR before placing and spreading operations are started.

To protect the subgrade and to ensure proper drainage, spreading of the subbase shall begin along the centerline of the pavement on a crowned section or on the high side of pavements with a one-way slope.

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154-3.3 Control Strip. The first half-day of subbase construction shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

154-3.4 Placement. The material shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted. The material shall not be placed when the underlying course is soft or yielding.

The material shall meet gradation and moisture requirements prior to compaction. Material may be free-draining and the minimum moisture content shall be established for placement and compaction of the material.

The material shall be constructed in lifts as established in the control strip, but not less than 4 inches (100 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

154-3.5 Compaction. The subbase material shall be compacted, adjusting moisture as necessary, to be within $\pm 2\%$ of optimum moisture. The field density of the compacted material shall be at least 100% of the maximum density as specified in paragraph 154-3.9a. If the specified density is not attained, the area of the lift represented by the test shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

The compaction of the P-154 material alongside the P-211 material in the sections referenced in the narrow compaction detail is to be considered incidental to the P-154 for Stabilized Shoulders. The subsequent scarifying and addition of remaining P-154 required to complete the section of P-154 Stabilized Shoulders is also to be included in the cost of P-154 for Stabilized Shoulders.

WARNING! A ductile iron raw watermain is located on the south side of the project – see plans for locations. Vibratory rolling will not be permitted within 10' of this pipe.

154-3.6 Weather limitation. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on subbase course shall not be conducted when the subgrade is wet or frozen or the subbase material contains frozen material.

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154-3.7 Maintenance. No base or surface course shall be placed on the subbase until the subbase has been accepted by the RPR. The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, the Contractor shall verify that materials still meet all specification requirements before placement of additional material. Equipment may be routed over completed sections of subbase course, provided the equipment does not damage the subbase course and the equipment is routed over the full width of the completed subbase course. Any damage to the subbase course from routing equipment over the subbase course shall be repaired by the Contractor at their expense.

154-3.8 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than $\pm \frac{1}{2}$ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within ± 0.05 feet (15 mm) of the specified grade.

154-3.9 Acceptance sampling and testing. The aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1,200 square yards (1000 square meters). Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. ~~The RPR shall perform all density tests~~ ***The RPR shall perform density tests as needed for QA. The Contractor shall perform density tests every 1,000 SY for QC.***

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D698 or D1557. The in-place field density shall be determined per ASTM D6938. If the specified density is not attained, the area represented by the failed test shall be reworked and/or recompact and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

When the material has greater than 30 percent retained on the $\frac{3}{4}$ inch (19.0 mm) sieve, use methods in ASTM D1557 and the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles.

b. Thickness. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompact to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

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METHOD OF MEASUREMENT

154-4.1 Subbase course shall be measured by the number of square yards of subbase course material placed and compacted to specified density and plan thickness requirements in the completed course. The quantity of subbase course material shall be measured in final position based upon survey of the completed work computed from elevations to the nearest 0.01 foot. On individual depth measurements, thicknesses more than 1/2 inch (12 mm) in excess of that shown on the plans shall be considered as the specified thickness plus 1/2 inch (12 mm) in computing the yardage for payment. Subbase materials shall not be included in any other excavation quantities.

BASIS OF PAYMENT

154-5.1 Payment shall be made at the contract unit price per square yard for subbase course. This price shall be full compensation for furnishing all materials; for all preparation, hauling, and placing of these materials; and for all labor, equipment, tools, **surveying**, and incidentals necessary to complete the item.

Payment will be made under:

| | |
|----------------|---|
| Item P-154-5.1 | Subbase Course, 12" Thick - per square yard |
| Item P-154-5.2 | Subbase Course, 6" Thick - per square yard |

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|--|
| ASTM C117 | Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing |
| ASTM C136 | Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates |
| ASTM D75 | Standard Practice for Sampling Aggregates |
| ASTM D698 | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³)) |
| ASTM D1556 | Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method |
| ASTM D1557 | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³)) |
| ASTM D2487 | Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System) |
| ASTM D4253 | Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table |
| ASTM D4759 | Practice for Determining the Specification Conformance of Geosynthetics |

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ASTM D4318 **Standard Test Methods for Liquid Limit, Plastic Limit, and
Plasticity Index of Soils**

ASTM D6938 **Standard Test Method for In-Place Density and Water Content of
Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)**

American Association of State Highway and Transportation Officials (AASHTO)

M 288 **Geotextile Specification for Highway Applications**

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ITEM P-211 LIME ROCK BASE COURSE

DESCRIPTION

211-1.1 This item shall consist of a base course composed of lime rock constructed on the prepared underlying course per these specifications and shall conform to the dimensions and typical cross-section shown on the plans.

MATERIALS

211-2.1 Materials. The lime rock base course material shall consist of fossiliferous limestone of uniform quality. The material shall not contain hard or flinty pieces that will cause a rough surface containing pits and pockets. The rock shall show no tendency to "air slake" or undergo chemical change when exposed to the weather. ***Lime rock material shall not contain chert or other extremely hard pieces, or lumps, balls or pockets of sand or clay material in sufficient quantity as to be detrimental to the proper bonding, finishing or strength of the lime rock base course.*** The material when watered and rolled shall be capable of compacting to a dense and well-bonded base.

Lime Rock Base Course Material Properties²

| | Lime Rock | Oolitic | Non-Oolitic |
|---|--------------------------|--------------------------|--------------------------|
| Carbonates of calcium and magnesium ¹ | 95% minimum | 70% minimum | 75% minimum |
| Oxides of iron and aluminum ¹ | Less than or equal to 2% | Less than or equal to 2% | Less than or equal to 2% |
| Liquid limit | Not greater than 35 | NA | Not greater than 35 |
| Plasticity Index | Not greater than 6 | NA | Not greater than 6 |
| Organic or foreign matter | Not more than 0.5% | Not more than 0.5% | Not more than 0.5% |
| Lime Bearing Ratio (LBR) ³ at 0 to +1.5% optimum | 125 | 125 | 125 |

¹ The combined amount of carbonates, oxides, and silica shall be at least 97%. The material shall be non-plastic.

² The chemical analysis of lime rock shall consist of determining the insoluble silica, iron oxide, and alumina by solution of the sample in hydrochloric (HCl) acid, evaporating, dehydrating, re-dissolving the residue, and neutralizing with ammonium hydroxide, filtering, washing, and igniting the residue lime rock. The difference between the percentage of insoluble matter and 100% is reported as carbonates of calcium and magnesium.

³ FM 5-515, Florida Method of Test for Lime Rock Bearing Ratio

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Lime Rock Base Course Gradation

| Sieve Designation (square openings) | Percentage by Weight Passing Sieves |
|--|--|
| 3-1/2 inch (87.5 mm) | 100 |
| 3/4 inch (19.0 mm) | 50-100 |

All fine material shall consist entirely of dust or fracture (fine portion passing the No. 10 (2.00 mm) sieve). ***The maximum individual dimension shall not exceed 6 inches. All crushing or break-up, which is necessary in order to meet these gradation requirements, shall be done before the lime rock is placed in the base course.***

211-2.2 Sampling and Testing.

a. Aggregate base materials. The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraph 211-2.1. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. Gradation requirements. The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation ***providing a consistent material source is used for that day.*** Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 209-2.1. The lot will be consistent with the lot size used for density. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

c. Sampling shall be taken by the Contractor Quality Control (QC) technician in the presence of the RPR's Quality Assurance (QA) representative. Each sample shall be mixed and quartered by the QC Technician such that the QC technician and the QA representative will each possess adequate size sample for testing.

211-2.3 Separation Geotextile. Not used.

CONSTRUCTION METHODS

211-3.1 Control strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

211-3.2 Preparing underlying course. ***Before any rock base course material is placed, the underlying course shall be prepared and conditioned as specified.*** The RPR shall check and accept the underlying course before placing and spreading operations are started. Any ruts or soft yielding places caused by improper drainage conditions, hauling, or any other cause shall be corrected at the Contractor's expense before the base course is placed. Material shall not be placed on frozen subgrade.

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To protect the underlying course and to insure proper drainage the spreading of the limerock shall begin along the centerline of the pavement on a crowned section or on the high side of pavement with a one-way slope.

211-3.3 Placement. The material shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The material shall meet gradation and moisture requirements prior to compaction. The layer shall be constructed in lifts as established in the control strip, but not less than 4 inches (100 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

211-3.4 Compaction. Immediately upon completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade. The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the subbase material delivered to the jobsite. The moisture content of the material during placing operations shall be within ± 2 percentage points of the optimum moisture content as determined by ASTM 1557. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

Sufficient rollers of the designated types shall be furnished to adequately handle the compaction of the material that has been placed and spread. Blading and rolling shall be done alternately as required or directed to obtain a smooth, even surface and until the entire depth of base is compacted into a dense, unyielding mass. Re-rolling of previous day's spread shall be done as directed. When the shoulder backfill material has been placed, the shoulder shall be thoroughly rolled and compacted

Along curbs, headers, and all areas inaccessible to the roller, the base course material shall be tamped thoroughly with mechanical or hand tampers.

In the areas of narrow full depth construction called out in the plans, refer to the typical detail for compaction methods.

WARNING! A ductile iron raw watermain is located on the south side of the project – see plans for locations. Vibratory rolling will not be permitted within 10' of this pipe.

211-3.5 Finishing. After the watering and rolling of the base course, the entire surface shall be scarified to a depth of at least 3 inches (75 mm) and shaped to the exact crown and cross-section with a blade grader. The scarified material shall be rewetted and thoroughly rolled. Rolling shall continue until the base is bonded and compacted to a dense, unyielding mass, true to grade and cross-section. Scarifying and rolling of the surface of the base shall follow the initial rolling of the lime rock by not more than four (4) days. When the lime rock base is constructed in two layers, the scarifying of the surface shall be to a depth of 2 inches (50 mm).

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If cracks or checks appear in the base before the surface course is laid, the Contractor shall rescarify, reshape, water, add lime rock where necessary, and recompact. If the underlying material becomes mixed with the base course material, the Contractor shall, without additional compensation, remove, reshape, and recompact the mixture.

211-3.6 Weather limitations. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

211-3.7 Maintenance. The base course shall be maintained in a condition that will meet all specification requirements until the work is accepted by the RPR. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at the Contractor's expense.

211-3.8 Surface tolerance. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75-mm), reshaped and recompact to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. Smoothness. The finished surface shall not vary more than 3/8-inch (9-mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid. **Straightedge shall be provided by the Contractor.**

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +0 and -1/2 inch (12 mm) of the specified grade.

211-3.9 Acceptance sampling and testing. Lime rock base course shall be accepted for density on an area basis. Two tests shall be made for density and thickness for each 2400 square yds (1000-m²). Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance. ***The Contractor shall perform density tests every 1,000 SY for QC. The RPR shall perform density tests as needed for QA.***

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D1557. The in-place field density shall be determined per ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the entire area shall be reworked and/or recompact and two additional random tests made. This procedure shall be followed until the specified density is

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reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. Depth tests shall be made by ~~survey test holes or cores at least 3 inches (75 mm) in diameter that extend through the base at intervals so each test shall represent 300 square yards in the presence of the RPR.~~ The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompact to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

211-3.10 Lime Rock Transition Wedges – *These are to be installed along drop-offs between airfield pavement and the work area or any condition as a result of the work that produces a drop off. Placement of these wedges is to be at the discretion of the Owner or RPR. The Unit Cost of these wedges shall cover both installation and removal of the limerock as per the Owner's instruction. The wedges may be placed in the same location more than once depending on the Phasing of the work in the area.*

211-3.11 Lime Rock Variable Thickness – *This base course is to be installed over existing limerock that has been scarified for 6"-8" below existing grade or whatever depth the RPR determines is sufficient to allow for cohesive installation and compaction of the new limerock. The Limerock will be placed in a variable thickness so that the planned grade is met as per these specifications. The contractor is to ensure that while scarifying the existing limerock, the material does not segregate and the condition is not damaged. If the existing limerock is damaged, the contractor will replace the damaged limerock at no cost to the Owner. The scarifying of existing limerock is considered incidental to this Pay Item.*

METHOD OF MEASUREMENT

211-4.1 The quantity of lime rock base course shall be the number of square yards (square meters) of base material placed, bonded, and accepted in the completed base course **at the specified thickness**. The quantity of base course material shall be measured in final position based upon depth tests **taken by the Contractor's Surveyor** as directed by the RPR. On individual depth measurements, thicknesses more than 1/2 inch (12 mm) in excess of that shown on the plans shall be considered as the specified thickness plus 1/2 inch (12 mm) in computing the yardage for payment.

BASIS OF PAYMENT

211-5.1 Payment shall be made at the contract unit price per square yards (square meters) for lime rock base course. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of these materials, and for all labor, equipment, tools, **survey**, and incidentals necessary to complete the item.

The cost of removing cracks and checks including the labor, and the additional lime rock necessary for crack elimination, will not be paid for separately but shall be included in the contract price per square yard (square meter) for lime rock base course.

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An As-Built survey taken by a Professionally Licensed Surveyor of the finished limerock surface must be provided after the installation of limerock is completed to receive payment for the limerock.

Payment will be made under:

- | | |
|------------------------------|---|
| <i>Item P-211-5.1</i> | <i>Lime Rock Base Course, 9" Thick – per Square Yard</i> |
| <i>Item P-211-5.2</i> | <i>Lime Rock Base Course, 6" Thick – per Square Yard</i> |
| <i>Item P-211-5.3</i> | <i>Lime Rock Base Course, (Variable Thickness 0" – 4" Thick) – per Square Yard</i> |
| <i>Item P-211-5.4</i> | <i>Lime Rock Transition Wedge – per Linear Foot</i> |

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

- | | |
|-------------------|---|
| ASTM C136 | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates |
| ASTM D75 | Standard Practice for Sampling Aggregates |
| ASTM D698 | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)) |
| ASTM D1556 | Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method |
| ASTM D1557 | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2700 kN-m/m³)) |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils |
| ASTM D4491 | Standard Test Methods for Water Permeability of Geotextiles by Permittivity |
| ASTM D4751 | Standard Test Methods for Determining Apparent Opening Size of a Geotextile |

American Association of State Highway and Transportation Officials (AASHTO)

- | | |
|-------------|---|
| M288 | Standard Specification for Geosynthetic Specification for Highway Applications |
|-------------|---|

END OF ITEM P-211

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ITEM P-401 ASPHALT MIX PAVEMENT**DESCRIPTION**

401-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared base or stabilized course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS

401-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel, ~~crushed slag~~, screenings, natural sand, and mineral filler, as required. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. ***The Contractor shall provide certification that aggregates are free of ferrous sulfides.*** Coarse aggregate is the material retained on the No. 4 (4.75-mm) sieve. Fine aggregate is the material passing the No. 4 (4.75-mm) sieve.

a. Coarse aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

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Coarse Aggregate Material Requirements

| Material Test | Requirement | Standard |
|---|--|----------------------|
| Resistance to Degradation | Loss: 40% maximum | ASTM C131 |
| Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate | Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate | ASTM C88 |
| Clay lumps and friable particles | 0.3% maximum | ASTM C142 |
| Percentage of Fractured Particles | For pavements designed for aircraft gross weights of 60,000 pounds (27200 kg) or more: Minimum 75% by weight of particles with at least two fractured faces and 85% with at least one fractured face ¹ | ASTM D5821 |
| | For pavements designed for aircraft gross weights less than 60,000 pounds (27200 kg): Minimum 50% by weight of particles with at least two fractured faces and 65% with at least one fractured face¹ | |
| Flat, Elongated, or Flat and Elongated Particles | 8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 ² | ASTM D4791 |
| Bulk density of slag³ | Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter) | ASTM C29- |

¹ The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

² A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

³ ~~Only required if slag is specified.~~

b. Fine aggregate. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the fine aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.

Fine Aggregate Material Requirements

| Material Test | Requirement | Standard |
|---|--|------------|
| Liquid limit | 25 maximum | ASTM D4318 |
| Plasticity Index | 4 maximum | ASTM D4318 |
| Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate | Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate | ASTM C88 |
| Clay lumps and friable particles | 0.3% maximum | ASTM C142 |
| Sand equivalent | 45 minimum | ASTM D2419 |
| Natural Sand | 15% maximum by weight of total aggregate | ASTM D1073 |

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c. Sampling. ASTM D75 shall be used in sampling coarse and fine aggregate.

401-2.2 Mineral filler. Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

Mineral Filler Requirements

| Material Test | Requirement | Standard |
|------------------|-------------|------------|
| Plasticity Index | 4 maximum | ASTM D4318 |

401-2.3 Asphalt binder. Asphalt binder shall conform to ASTM D6373 Performance Grade (PG) 76-22.

Asphalt Binder PG Plus Test Requirements

| Material Test | Requirement | Standard |
|------------------|-------------|------------|
| Elastic Recovery | 75% minimum | ASTM D6084 |

401-2.4 Anti-stripping agent. Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

COMPOSITION

401-3.1 Composition of mixture(s). The asphalt mix shall be composed of a mixture of aggregates, filler and anti-strip agent if required, and asphalt binder. The aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

401-3.2 Job mix formula (JMF) laboratory. The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF; and be listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Resident Project Representative (RPR) prior to start of construction.

401-3.3 Job mix formula (JMF). No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements.

The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 401-3.2. The asphalt mixture shall be designed using procedures contained in Asphalt Institute MS-2 Mix Design Manual, 7th Edition. Samples shall be prepared and compacted using the gyratory compactor in accordance with ASTM D6925.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF

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has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

The JMF shall be submitted in writing by the Contractor at least **30** days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- a. Manufacturer's Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 401-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- b. Manufacturer's Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 401-2.4.
- c. Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 401-2.1.
- d. Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- e. Specific Gravity and absorption of each coarse and fine aggregate.
- f. Percent natural sand.
- g. Percent fractured faces.
- h. Percent by weight of flat particles, elongated particles, and flat and elongated particles (and criteria).
- i. Percent of asphalt.
- j. Number of ~~blows or~~ gyrations
- k. Laboratory mixing and compaction temperatures.
- l. Supplier-recommended field mixing and compaction temperatures.
- m. Plot of the combined gradation on a 0.45 power gradation curve.
- n. Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- o. Tensile Strength Ratio (TSR).
- p. Type and amount of Anti-strip agent when used.
- q. Asphalt Pavement Analyzer (APA) results.
- r. Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted. ***All material testing, for shop drawing submittals, will be performed by an engineer registered in the state of Florida.***

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Material testing must be performed within 6 months of shop drawing submittal. Shop drawings with tests performed beyond 6 months will be rejected.

Table 1. Asphalt Design Criteria

| Test Property | Value | Test Method |
|---|--|---|
| Number of blows or gyrations | 75 | |
| Air voids (%) | 2.8 – 4.2 | ASTM D3203 |
| Percent voids in mineral aggregate (VMA), minimum | See Table 2 | ASTM D6995 |
| Tensile Strength Ratio (TSR) ¹ | not less than 80 at a saturation of 70-80% | ASTM D4867 |
| Asphalt Pavement Analyzer (APA) ² | Less than 10 mm @ 4000 passes | AASHTO T340 at 250 psi hose pressure at 64°C test temperature |

¹ Test specimens for TSR shall be compacted at 7 ± 1.0 % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

² AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply; be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

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Table 2. Aggregate - Asphalt Pavements

| Sieve Size | Percentage by Weight Passing Sieves | | |
|---|-------------------------------------|-------------|------------------------|
| | Gradation 1 | Gradation 2 | Gradation 3 |
| 1 inch (25.0 mm) | 100 | -- | -- |
| 3/4 inch (19.0 mm) | 90-100 | 100 | -- |
| 1/2 inch (12.5 mm) | 68-88 | 90-100 | 100 |
| 3/8 inch (9.5 mm) | 60-82 | 72-88 | 90-100 |
| No. 4 (4.75 mm) | 45-67 | 53-73 | 58-78 |
| No. 8 (2.36 mm) | 32-54 | 38-60 | 40-60 |
| No. 16 (1.18 mm) | 22-44 | 26-48 | 28-48 |
| No. 30 (600 µm) | 15-35 | 18-38 | 18-38 |
| No. 50 (300 µm) | 9-25 | 11-27 | 11-27 |
| No. 100 (150 µm) | 6-18 | 6-18 | 6-18 |
| No. 200 (75 µm) | 3-6 | 3-6 | 3-6 |
| Minimum Voids in Mineral Aggregate (VMA) ¹ | 14.0 | 15.0 | 16.0 |
| Asphalt percent by total weight of mixture: | | | |
| Stone or gravel | 4.5-7.0 | 5.0-7.5 | 5.5-8.0 |
| Slag | 5.0-7.5 | 6.5-9.5 | 7.0-10.5 |
| Recommended Minimum Construction Lift Thickness | 3 inch | 2 inch | 1 1/2 inch |

Gradation 2 for runways, taxiways and apron.**~~Gradation 3 is intended for leveling courses. FAA approval is required for use in other locations.~~**

¹To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

401-3.4 Reclaimed asphalt pavement (RAP). RAP shall not be used.

401-3.5 Control Strip. Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR. The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

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The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 401-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons (~~227 metric tons~~) or 1/2 subplot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 401-4.14 using the same procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when the mat has cooled to less than 160°F (71°C). The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 401-5.5a; and Mat density, air voids, and joint density meet the requirements specified in paragraphs 401-6.2.

If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor's expense.

Payment will only be made for an acceptable control strip in accordance with paragraph 401-8.1 using a lot pay factor equal to 100.

CONSTRUCTION METHODS

401-4.1 Weather limitations. The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

Table 4. Surface Temperature Limitations of Underlying Course

| Mat Thickness | Base Temperature (Minimum) | |
|--|----------------------------|----|
| | °F | °C |
| 3 inches (7.5 cm) or greater | 40 ¹ | 4 |
| Greater than 2 inches (50 mm) but less than 3 inches (7.5 cm) | 45 | 7 |

401-4.2 Asphalt plant. Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items.

a. Inspection of plant. The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

b. Storage bins and surge bins. The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12)

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hours. If the RPR determines there is an excessive heat loss, segregation, or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

401-4.3 Aggregate stockpile management. Aggregate stockpiles shall be constructed in a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the asphalt batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.

A continuous supply of materials shall be provided to the work to ensure continuous placement.

401-4.4 Hauling equipment. Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

401-4.4.1 Material transfer vehicle (MTV). Material transfer vehicles used to transfer the material from the hauling equipment to the paver, shall use a self-propelled, material transfer vehicle with a swing conveyor that can deliver material to the paver without making contact with the paver. The MTV shall be able to move back and forth between the hauling equipment and the paver providing material transfer to the paver, while allowing the paver to operate at a constant speed. The Material Transfer Vehicle will have remixing and storage capability to prevent physical and thermal segregation. ***Use of a MTV is optional and at the discretion of the Contractor. Any damage to airport infrastructure from MTV use will be repaired by the Contractor and at the Contractor's expense.***

401-4.5 Asphalt pavers. Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.12.

401-4.6 Rollers. The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, clean, and capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

WARNING! A ductile iron raw watermain is located on the south side of the project – see plans for locations. Vibratory rolling will not be permitted within 10' of this pipe.

401-4.7 Density device. The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production

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paving. The Contractor shall supply a qualified technician during all paving operations to calibrate the gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

401-4.8 Preparation of asphalt binder. The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt binder to the mixer at a uniform temperature. The temperature of unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F (175°C) when added to the aggregate.

401-4.9 Preparation of mineral aggregate. The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

401-4.10 Preparation of Asphalt mixture. The aggregates and the asphalt binder shall be weighed or metered and mixed in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

401-4.11 Application of Prime and Tack Coat. Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.

A prime coat in accordance with Item P-602 shall be applied to aggregate base prior to placing the asphalt mixture.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

401-4.12 Laydown plan, transporting, placing, and finishing. Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2d before the next lift can be placed.

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Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of 12.5 feet (m) except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least one foot (~~30-cm~~); however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet (3 m) from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet (3 m). On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet (3 m) long.

401-4.13 Compaction of asphalt mixture. After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor's expense.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted

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to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

WARNING! A ductile iron raw watermain is located on the south side of the project – see plans for locations. Vibratory rolling will not be permitted within 10' of this pipe.

401-4.14 Joints. The formation of all joints shall be made to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint.

Longitudinal joints which have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F (80°C); or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches (75 mm) to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. Asphalt tack coat in accordance with P-603 shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt.

401-4.15 Saw-cut grooving. Saw-cut grooves shall be provided as specified in Item P-621.

401-4.16 Diamond grinding. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with a sufficient number of blades to create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that cause ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

401-4.17 Nighttime paving requirements. The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.

The lighting plan will address the following items:

a. All paving machines, rollers, distribution trucks and other vehicles required by the Contractor for his operations shall be equipped with artificial illumination sufficient to safely complete the work.

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b. Minimum illumination level shall be twenty (20) horizontal foot-candles and maintained in the following areas:

(1) An area of 30 feet (9-m) wide by 30 feet (9-m) long immediately behind the paving machines during the operations of the machines.

(2) An area 15 feet (4.5-m) wide by 30 feet (9-m) long immediately in front and back of all rolling equipment, during operation of the equipment.

(3) An area 15 feet (4.5-m) wide by 15 feet (4.5-m) long at any point where an area is being tack coated prior to the placement of pavement.

c. As partial fulfillment of the above requirements, the Contractor shall furnish and use, complete artificial lighting units with a minimum capacity of 3,000 watt electric beam lights, affixed to all equipment in such a way to direct illumination on the area under construction.

d. A lighting plan must be submitted by the Contractor and approved by the Engineer prior to the start of any nighttime work.

If the Contractor places any out of specification mix in the project work area, the Contractor is required to remove it at its own expense, to the satisfaction of the RPR. If the Contractor has to continue placing non-payment HMA, as directed by the RPR, to make the surfaces safe for aircraft operations, the Contractor shall do so to the satisfaction of the RPR. It is the Contractor's responsibility to leave the facilities to be paved in a safe condition ready for aircraft operations. No consideration for extended closure time of the area being paved will be given. As a first order of work for the next paving shift, the Contractor shall remove all out of specification material and replace with approved material to the satisfaction of the Engineer. When the above situations occur, there will be no consideration given for additional construction time or payment for extra costs.

CONTRACTOR QUALITY CONTROL (CQC)

401-5.1 General. The Contractor shall develop a Contractor Quality Control Program (CQCP) in accordance with Item C-100. No partial payment will be made for materials without an approved CQCP.

401-5.2 Contractor quality control (QC) facilities. The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

401-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

a. Asphalt content. A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of

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plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

b. Gradation. Aggregate gradations shall be determined a minimum of twice per day from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136, and ASTM C117.

c. Moisture content of aggregate. The moisture content of aggregate used for production shall be determined a minimum of once per day in accordance with ASTM C566.

d. Moisture content of asphalt. The moisture content shall be determined once per day in accordance with AASHTO T329 or ASTM D1461.

e. Temperatures. Temperatures shall be checked, at least four times per day, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

f. In-place density monitoring. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than 1/4 inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, ProFAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing the surface course to full depth. Grinding shall be

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tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3). Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall be evaluated prior to and after the placement of the first lift and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically. The documentation will be provided by the Contractor to the RPR.

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 401-4.16.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus 1/2 inch and replacing with new material. Skin patching is not allowed.

401-5.4 Sampling. When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

401-5.5 Control charts. The Contractor shall maintain linear control charts for both individual measurements and range (i.e. difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day will be calculated and monitored by the QC laboratory.

Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

a. Individual measurements. Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the job mix formula target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

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Control Chart Limits for Individual Measurements

| Sieve | Action Limit | Suspension Limit |
|------------------------|--------------|------------------|
| 3/4 inch (19.0 mm) | ±6% | ±9% |
| 1/2 inch (12.5 mm) | ±6% | ±9% |
| 3/8 inch (9.5 mm) | ±6% | ±9% |
| No. 4 (4.75 mm) | ±6% | ±9% |
| No. 16 (1.18 mm) | ±5% | ±7.5% |
| No. 50 (300 µm) | ±3% | ±4.5% |
| No. 200 (75 µm) | ±2% | ±3% |
| Asphalt Content | ±0.45% | ±0.70% |
| Minimum VMA | -0.5% | -1.0% |

b. Range. Control charts shall be established to control gradation process variability. The range shall be plotted as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of $n = 2$. Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for $n = 3$ and by 1.27 for $n = 4$.

Control Chart Limits Based on Range

| Sieve | Suspension Limit |
|------------------------|------------------|
| 1/2 inch (12.5 mm) | 11% |
| 3/8 inch (9.5 mm) | 11% |
| No. 4 (4.75 mm) | 11% |
| No. 16 (1.18 mm) | 9% |
| No. 50 (300 µm) | 6% |
| No. 200 (75 µm) | 3.5% |
| Asphalt Content | 0.8% |

c. Corrective Action. [The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As

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a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

- (1) One point falls outside the Suspension Limit line for individual measurements or range; or
- (2) Two points in a row fall outside the Action Limit line for individual measurements.

401-5.6 QC reports. The Contractor shall maintain records and shall submit reports of QC activities daily, in accordance with Item C-100 .

MATERIAL ACCEPTANCE

401-6.1 Acceptance sampling and testing. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor. ***Coring of the in-place pavement, which will be performed by the Contractor, will include patching of the hole and delivery of cores to the RPR or his agent for testing.***

a. Quality assurance (QA) testing laboratory. The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

b. Lot size. A standard lot will be equal to one day's production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day's production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

c. Asphalt air voids. Plant-produced asphalt will be tested for air voids on a subplot basis.

(1) Sampling. Material from each subplot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF. ***For mixtures containing aggregates with absorption values greater than 1.5%, the mixture shall be maintained at a temperature at or above the specified compaction temperature for a period of not less than 60 minutes nor more than 90 minutes to stabilize to compaction temperatures.***

(2) Testing. Air voids will be determined for each subplot in accordance with ASTM D3203 for a set of compacted specimens prepared in accordance with ASTM D6925.

d. In-place asphalt mat and joint density. Each subplot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

(1) Sampling. The Contractor will cut minimum 5 inch (125 mm) diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

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(2) Bond. Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

(3) Thickness. Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each subplot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch (6 mm) less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or subplot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

(4) Mat density. One core shall be taken from each subplot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot (30 cm) from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each subplot sample by the TMD for that subplot.

(5) Joint density. One core centered over the longitudinal joint shall be taken for each subplot that has a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will be the lower of the average TMD values from the adjacent lots.

401-6.2 Acceptance criteria.

a. General. Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, grade and Profilograph roughness.

b. Air Voids and Mat density. Acceptance of each lot of plant produced material for mat density and air voids will be based on the percentage of material within specification limits (PWL). If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment will be determined in accordance with paragraph 401-8.1.

c. Joint density. Acceptance of each lot of plant produced asphalt for joint density will be based on the PWL. If the PWL of the lot is equal to or exceeds 90%, the lot will be considered acceptable. If the PWL is less than 90%, the Contractor shall evaluate the reason and act accordingly. If the PWL is less than 80%, the Contractor shall cease operations and until the reason for poor compaction has been determined. If the PWL is less than 71%, the pay factor for the lot used to complete the joint will be reduced by five (5) percentage points. This lot pay factor reduction will be incorporated and evaluated in accordance with paragraph 401-8.1.

d. Grade. The final finished surface of the pavement shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch (12 mm) vertically.

Cross-sections of the pavement shall be taken at a minimum 50-foot longitudinal spacing and at all longitudinal grade breaks. Minimum cross-section grade points shall include grade at centerline, ± 10 feet of centerline, and edge of runway or taxiway pavement.

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The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the subplot shall not be more than 95%.

e. Profilograph roughness for QA Acceptance. The final profilograph shall be the full length of the project to facilitate testing of roughness between lots. The Contractor, in the presence of the RPR shall perform a profilograph roughness test on the completed project with a profilograph meeting the requirements of ASTM E1274 or a Class I inertial profiler meeting ASTM E950. Data and results shall be provided within 48 hrs of profilograph roughness tests.

The pavement shall have an average profile index less than 15 inches per mile per 1/10 mile. The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate "must grind" bumps and the Profile Index for the pavement using a 0.2-inch (5 mm) blanking band. The bump template must span one inch (25 mm) with an offset of 0.4 inches (10 mm). The profilograph must be calibrated prior to use and operated by a factory or State DOT approved, trained operator. Profilograms shall be recorded on a longitudinal scale of one inch (25 mm) equals 25 feet (7.5 m) and a vertical scale of one inch (25 mm) equals one inch (25 mm). Profilograph shall be performed one foot right and left of project centerline and 15 feet (4.5 m) right and left of project centerline. Any areas that indicate "must grind" shall be corrected with diamond grinding per paragraph 401-4.16 or by removing and replacing full depth of surface course, as directed by the RPR. Where corrections are necessary, a second profilograph run shall be performed to verify that the corrections produced an average profile index of 15 inches per mile per 1/10 mile or less.

401-6.3 Percentage of material within specification limits (PWL). The PWL will be determined in accordance with procedures specified in Item C-110. The specification tolerance limits (L) for lower and (U) for upper are contained in Table 5.

Table 5. Acceptance Limits for Air Voids and Density

| Test Property | Pavements Specification Tolerance Limits | |
|---------------------------------------|--|-----|
| | L | U |
| Air Voids Total Mix (%) | 2.0 | 5.0 |
| Surface Course Mat Density (%) | 92.8 | - |
| Base Course Mat Density (%) | 92.0 | - |
| Joint density (%) | 90.5 | -- |

a. Outliers. All individual tests for mat density and air voids will be checked for outliers (test criterion) in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded, and the PWL will be determined using the remaining test values. The criteria in Table 5 is based on production processes which have a variability with the following standard deviations: Surface Course Mat Density (%), 1.30; Base Course Mat Density (%), 1.55; Joint Density (%), 1.55.

The Contractor should note that (1) 90 PWL is achieved when consistently producing a surface course with an average mat density of at least 94.5% with 1.30% or less variability, (2) 90 PWL is achieved when consistently producing a base course with an average mat density of at least 94.0% with 1.55% or less variability, and (3) 90 PWL is achieved when consistently producing joints with an average joint density of at least 92.5% with 1.55% or less variability.

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401-6.4 Resampling pavement for mat density.

a. General. Resampling of a lot of pavement will only be allowed for mat density, and then, only if the Contractor requests same, in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the sampling and testing procedures contained in paragraphs 401-6.1d and 401-6.2b. Only one resampling per lot will be permitted.

(1) A redefined PWL will be calculated for the resampled lot. The number of tests used to calculate the redefined PWL will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. Payment for resampled lots. The redefined PWL for a resampled lot will be used to calculate the payment for that lot in accordance with Table 6.

c. Outliers. Check for outliers in accordance with ASTM E178, at a significance level of 5%.

~~**401-6.5 Leveling course.** The leveling course is the first variable thickness lift placed to correct surface irregularities prior to placement of subsequent courses. The leveling course shall meet the aggregate gradation in Table 2, paragraph 401-3.3. The leveling course shall meet the requirements of paragraph 401-3.3, 401-6.2b for air voids, but shall not be subject to the density requirements of paragraph 401-6.2b for mat density and 401-6.2c for joint density. The leveling course shall be compacted with the same effort used to achieve density of the control strip. The leveling course shall not exceed the maximum lift thickness associated with each gradation in Table 2, paragraph 401-3.3.~~

METHOD OF MEASUREMENT

401-7.1 Measurement. Asphalt shall be measured by the number of tons kg of asphalt used in the accepted work. Batch weights or truck scale weights will be used to determine the basis for the tonnage.

BASIS OF PAYMENT

401-8.1 Payment. Payment for a lot of asphalt meeting all acceptance criteria as specified in paragraph 401-6.2 shall be made based on results of tests for mat density and air voids. Payment for acceptable lots shall be adjusted according to paragraph 401-8.1c for mat density and air voids; and paragraph 401-6.2c for joint density, subject to the limitation that:

a. The total project payment for plant mix asphalt pavement shall not exceed **100%** percent of the product of the contract unit price and the total number of tons (kg) of asphalt used in the accepted work.

b. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

c. Basis of adjusted payment. The pay factor for each individual lot shall be calculated in accordance with Table 6. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71% then the lot pay factor shall be reduced by 5% but be no higher than 95%.

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For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 401-8.1a. Payment in excess of 100% for accepted lots of asphalt shall be used to offset payment for accepted lots of asphalt pavement that achieve a lot pay factor less than 100%.

Payment for sublots which do not meet grade in accordance with paragraph 401-6.2d after correction for over 25% of the sublot shall be reduced by 5%.

Table 6. Price adjustment schedule¹

| Percentage of material within specification limits (PWL) | Lot pay factor (percent of contract unit price) |
|---|--|
| 96 – 100 | 106 |
| 90 – 95 | PWL + 10 |
| 75 – 89 | 0.5 PWL + 55 |
| 55 – 74 | 1.4 PWL – 12 |
| Below 55 | Reject ² |

¹ Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment above 100% shall be subject to the total project payment limitation specified in paragraph 401-8.1a.

² The lot shall be removed and replaced. However, the RPR may decide to allow the rejected lot to remain. In that case, if the RPR and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot.

d. Profilograph Roughness. The Contractor will receive full payment when the profilograph average profile index is in accordance with paragraph 401-6.2e. When the final average profile index for the entire length of pavement does not exceed 15 inches per mile per 1/10 mile, payment will be made at the contract unit price for the completed pavement.

e. Survey – The contractor is to provide a survey from a professionally licensed surveyor after the completion of the asphalt installation. This is a requirement for payment of the surface course of asphalt.

f. Transition Wedges – Asphalt transition wedges between phases are to be paid for under this pay item per ton

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401-8.1 Payment.

Payment will be made under:

Item P-401-8.1 Hot Mixed Asphalt Pavement (Surface) – per Ton

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|---|
| ASTM C29 | Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate |
| ASTM C88 | Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate |
| ASTM C117 | Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing |
| ASTM C127 | Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate |
| ASTM C131 | Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine |
| ASTM C136 | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates |
| ASTM C142 | Standard Test Method for Clay Lumps and Friable Particles in Aggregates |
| ASTM C566 | Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying |
| ASTM D75 | Standard Practice for Sampling Aggregates |
| ASTM D242 | Standard Specification for Mineral Filler for Bituminous Paving Mixtures |
| ASTM D946 | Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction |
| ASTM D979 | Standard Practice for Sampling Asphalt Paving Mixtures |
| ASTM D1073 | Standard Specification for Fine Aggregate for Asphalt Paving Mixtures |
| ASTM D1188 | Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples |
| ASTM D2172 | Standard Test Method for Quantitative Extraction of Bitumen from Asphalt Paving Mixtures |
| ASTM D1461 | Standard Test Method for Moisture or Volatile Distillates in Asphalt Paving Mixtures |

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| | |
|------------|---|
| ASTM D2041 | Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures |
| ASTM D2419 | Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate |
| ASTM D2489 | Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures |
| ASTM D2726 | Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures |
| ASTM D2950 | Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods |
| ASTM D3203 | Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures |
| ASTM D3381 | Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils |
| ASTM D4552 | Standard Practice for Classifying Hot-Mix Recycling Agents |
| ASTM D4791 | Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate |
| ASTM D4867 | Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures |
| ASTM D5361 | Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing |
| ASTM D5444 | Standard Test Method for Mechanical Size Analysis of Extracted Aggregate |
| ASTM D5821 | Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate |
| ASTM D6084 | Standard Test Method for Elastic Recovery of Bituminous Materials by Ductilometer |
| ASTM D6307 | Standard Test Method for Asphalt Content of Hot Mix Asphalt by Ignition Method |
| ASTM D6373 | Standard Specification for Performance Graded Asphalt Binder |
| ASTM D6752 | Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method |
| ASTM D6925 | Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave Gyrotory Compactor. |

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| | |
|---|---|
| ASTM D6926 | Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus |
| ASTM D6927 | Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures |
| ASTM D 6931 | Indirect Tensile (IDT) Strength of Bituminous Mixtures |
| ASTM D6995 | Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm) |
| ASTM E11 | Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves |
| ASTM E178 | Standard Practice for Dealing with Outlying Observations |
| ASTM E1274 | Standard Test Method for Measuring Pavement Roughness Using a Profilograph |
| ASTM E950 | Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference |
| ASTM E2133 | Standard Test Method for Using a Rolling Inclinator to Measure Longitudinal and Transverse Profiles of a Traveled Surface |
| American Association of State Highway and Transportation Officials (AASHTO) | |
| AASHTO M156 | Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures. |
| AASHTO T329 | Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method |
| AASHTO T324 | Standard Method of Test for Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures |
| AASHTO T 340 | Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA) |
| Asphalt Institute (AI) | |
| Asphalt Institute Handbook MS-26, Asphalt Binder | |
| Asphalt Institute MS-2Mix Design Manual, 7th Edition | |
| AI State Binder Specification Database | |
| Federal Highway Administration (FHWA) | |
| Long Term Pavement Performance Binder Program | |
| Advisory Circulars (AC) | |
| AC 150/5320-6 | Airport Pavement Design and Evaluation |
| FAA Orders | |
| 5300.1 | Modifications to Agency Airport Design, Construction, and Equipment Standards |

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ITEM P-403 ASPHALT MIX PAVEMENT COURSE**DESCRIPTION**

403-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

All materials and construction shall conform to the Florida Department of Transportation (FDOT) "Standard Specifications for Road and Bridge Construction" (Specifications) dated July 2018.

MATERIALS

403-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel, crushed slag, screenings, natural sand and mineral filler, as required. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. Coarse aggregate is the material retained on the No. 4 (4.75 mm) sieve. Fine aggregate is the material passing the No. 4 (4.75 mm) sieve.

a. Coarse aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

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Coarse Aggregate Material Requirements

| Material Test | Requirement | Standard |
|---|--|-----------------|
| Resistance to Degradation | Loss: 40% maximum for surface, asphalt binder, and leveling course Loss: 50% maximum for base course | ASTM C131 |
| Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate | Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate | ASTM C88 |
| Clay lumps and friable particles | 0.3% maximum | ASTM C142 |
| Percentage of Fractured Particles | For pavements designed for aircraft gross weights of 60,000 pounds (27200 kg) or more: Minimum 75% by weight of particles with at least two fractured faces and 85% with at least one fractured face ¹ | ASTM D5821 |
| | For pavements designed for aircraft gross weights less than 60,000 pounds (27200 kg): Minimum 50% by weight of particles with at least two fractured faces and 65% with at least one fractured face ¹ | |
| Flat, Elongated, or Flat and Elongated Particles | 8% maximum, by weight, of flat, elongated, or flat and elongated particles with a value of 5:1 ² | ASTM D4791 |
| Bulk density of slag ³ | Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter) | ASTM C29. |

¹ The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

² A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

³ Only required if slag is specified.

b. Fine aggregate. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.

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Fine Aggregate Material Requirements

| Material Test | Requirement | Standard |
|---|---|-----------------|
| Liquid limit | 25 maximum | ASTM D4318 |
| Plasticity Index | 4 maximum | ASTM D4318 |
| Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate | Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate | ASTM C88 |
| Clay lumps and friable particles | 0.3% maximum | ASTM C142 |
| Sand equivalent | 45 minimum | ASTM D2419 |
| Natural Sand | 0 to 15% maximum by weight of total aggregate | ASTM D1073 |

c. Sampling. ASTM D75 shall be used in sampling coarse and fine aggregate, and ASTM C183 shall be used in sampling mineral filler.

403-2.2 Mineral filler. Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

Mineral filler Requirements

| Material Test | Requirement | Standard |
|----------------------|--------------------|-----------------|
| Plasticity Index | 4 maximum | ASTM D4318 |

403-2.3 Asphalt binder. Asphalt binder shall conform to ASTM D6373 Performance Grade (PG)

Asphalt Binder PG Plus Test Requirements

| Material Test | Requirement | Standard |
|----------------------|--------------------|-----------------|
| Elastic Recovery | 75% minimum | ASTM D6084 |

403-2.4 Anti-stripping agent. Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

COMPOSITION

403-3.1 Composition of mixture. The asphalt plant mix shall be composed of a mixture of well-graded aggregate, filler and anti-strip agent if required, and asphalt binder. The several aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

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403-3.2 Job mix formula (JMF) laboratory. The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF, and listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

403-3.3 Job mix formula (JMF). No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements.

The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 403-3.2. The asphalt mixture shall be designed using procedures contained in Asphalt Institute MS-2 Mix Design Manual, 7th Edition. Samples shall be prepared and compacted using a Marshall compactor in accordance with ASTM D6926.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

The JMF shall be submitted in writing by the Contractor at least [30] days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The submitted JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- Manufacturer's Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 403-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- Manufacturer's Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 403-2.4.
- Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 403-2.1 and 403-2.2.
- Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- Specific Gravity and absorption of each course and fine aggregate.
- Percent natural sand.
- Percent fractured faces.

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- Percent by weight of flat particles, elongated particles, and flat and elongated particles (and criteria).
- Percent of asphalt.
- Number of blows or gyrations.
- Laboratory mixing and compaction temperatures.
- Supplier recommended mixing and compaction temperatures.
- Plot of the combined gradation on the 0.45 power gradation curve.
- Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- Tensile Strength Ratio (TSR).
- Type and amount of Anti-strip agent when used.
- Asphalt Pavement Analyzer (APA) results.
- Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

Table 1. Asphalt Design Criteria

| Test Property | Value | Test Method |
|---|--|---|
| Number of blows/gyrations | [75] | |
| Air voids (%) | 3.5 | ASTM D3203 |
| Percent voids in mineral aggregate (VMA), minimum | See Table 2 | ASTM D6995 |
| TSR ¹ | not less than [80] at a saturation of 70-80% | ASTM D4867 |
| Asphalt Pavement Analyzer (APA) ² | Less than 10 mm @ 4000 passes | AASHTO T340 at 250 psi hose pressure at 64°C test temperature |

¹ Test specimens for TSR shall be compacted at 7 ± 1.0 % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

² AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply, be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

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Table 2. Aggregate - Asphalt Pavements

| Sieve Size | Percentage by Weight Passing Sieve |
|--|---|
| 1 inch (25.0 mm) | 100 |
| 3/4 inch (19.0 mm) | 90-100 |
| 1/2 inch (12.5 mm) | 68-88 |
| 3/8 inch (9.5 mm) | 60-82 |
| No. 4 (4.75 mm) | 45-67 |
| No. 8 (2.36 mm) | 32-54 |
| No. 16 (1.18 mm) | 22-44 |
| No. 30 (600 µm) | 15-35 |
| No. 50 (300 µm) | 9-25 |
| No. 100 (150 µm) | 6-18 |
| No. 200 (75 µm) | 3-6 |
| Voids in Mineral Aggregate (VMA)¹ | 14 |
| Asphalt Percent: | |
| Stone or gravel | 4.5-7.0 |
| Slag | 5.0-7.5 |
| Recommended Minimum Construction Lift Thickness | 3 inches |

¹To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

¹Gradation 3 is intended for leveling courses. FAA approval is required for use in other locations.

403-3.5 Control strip. Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR. The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 403-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons (227 metric tons) or 1/2 subplot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 403-4.13 using the same procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when

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the mat has cooled to less than 160°F (71°C). The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip shall be evaluated for acceptance as a single lot in accordance with the acceptance criteria in paragraph 403-6.1 and 403-6.2. The control strip shall be divided into equal sublots. As a minimum, the control strip shall consist of three (3) sublots.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 403-5.5a; and Mat density, air voids, and joint density meet the requirements specified in paragraphs 403-6.2.

If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor's expense.

Payment will only be made for an acceptable control strip in accordance with paragraph 403-8.1.

CONSTRUCTION METHODS

403-4.1 Weather limitations. The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

Table 4. Surface Temperature Limitations of Underlying Course

| Mat Thickness | Base Temperature (Minimum) | |
|--|----------------------------|-----------|
| | Degrees F | Degrees C |
| 3 inches (7.5 cm) or greater | 40 | 4 |
| Greater than 2 inches (50 mm) but less than 3 inches (7.5 cm) | 45 | 7 |

403-4.2 Asphalt plant. Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items:

a. Inspection of plant. The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

b. Storage bins and surge bins. The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12) hours. If the RPR determines there is an excessive heat loss, segregation or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

403-4.3 Aggregate stockpile management. Aggregate stockpiles shall be constructed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from

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different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.

A continuous supply of materials shall be provided to the work to ensure continuous placement.

403-4.4 Hauling equipment. Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

403-4.4.1 Material transfer vehicle (MTV). A material transfer vehicle is not required.

403-4.5 Asphalt pavers. Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.11.

403-4.6 Rollers. The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

403-4.6.1 Density device. The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall also supply a qualified technician during all paving operations to calibrate the density gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No separate payment will be made for supplying the density gauge and technician.

403-4.7 Preparation of asphalt binder. The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt material to the mixer at a uniform temperature. The temperature of the unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F (175°C) when added to the aggregate.

403-4.8 Preparation of mineral aggregate. The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care shall be taken that aggregates high in

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calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

403-4.9 Preparation of asphalt mixture. The aggregates and the asphalt binder shall be weighed or metered and introduced into the mixer in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

403-4.10 Application of Prime and Tack Coat. Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.

A prime coat in accordance with Item P-602 shall be applied to aggregate base prior to placing the asphalt mixture.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

403-4.11 Laydown plan, transporting, placing, and finishing. Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2e before the next lift can be placed.

Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of 10 feet (m) except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least 1 foot (30 cm); however, the joint in the surface top course shall be at the

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centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet (3 m) from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet (3 m). On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet (3 m) long.

403-4.12 Compaction of asphalt mixture. After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor's expense.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

403-4.13 Joints. The formation of all joints shall be made in such a manner as to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint.

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Longitudinal joints which have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F (80°C); or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches (75 mm) to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. An asphalt tack coat or other product approved by the RPR shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt.

403-4.14 Saw-cut grooving. Saw-cut grooving is not required.

403-4.15 Diamond grinding. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with a minimum of 55 to 60 blades per 12 inches (300 mm) of cutting head width; grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that causes ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

403-4.16 Nighttime Paving Requirements. The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.

CONTRACTOR QUALITY CONTROL (CQC)

403-5.1 General. The Contractor shall develop a CQCP in accordance with Item C-100. No partial payment will be made for materials that are subject to specific QC requirements without an approved CQCP.

403-5.2 Contractor quality control (QC) facilities. The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

403-5.3 Quality Control (QC) testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture,

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field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

a. Asphalt content. A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

b. Gradation. Aggregate gradations shall be determined a minimum of twice per lot from mechanical analysis of extracted aggregate in accordance with ASTM D5444 and ASTM C136, and ASTM C117.

c. Moisture content of aggregate. The moisture content of aggregate used for production shall be determined a minimum of once per lot in accordance with ASTM C566.

d. Moisture content of asphalt. The moisture content of the asphalt shall be determined once per lot in accordance with AASHTO T329 or ASTM D1461.

e. Temperatures. Temperatures shall be checked, at least four times per lot, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

f. In-place density monitoring. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than 1/4 inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, ProFAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements will be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

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(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests will be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 403-4.15 or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3). Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall be evaluated prior to the placement of the first lift and then prior to and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically and 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR within 24

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 403-4.15.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus 1/2 inch and replacing with new material. Skin patching is not allowed.

403-5.4 Sampling. When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

403-5.5 Control charts. The Contractor shall maintain linear control charts both for individual measurements and range (i.e., difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day shall be calculated and monitored by the QC laboratory.

Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the

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Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

a. Individual measurements. Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the JMF target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

Control Chart Limits for Individual Measurements

| Sieve | Action Limit | Suspension Limit |
|--------------------|---------------------|-------------------------|
| 3/4 inch (19.0 mm) | ±6% | ±9% |
| 1/2 inch (12.5 mm) | ±6% | ±9% |
| 3/8 inch (9.5 mm) | ±6% | ±9% |
| No. 4 (4.75 mm) | ±6% | ±9% |
| No. 16 (1.18 mm) | ±5% | ±7.5% |
| No. 50 (300 µm) | ±3% | ±4.5% |
| No. 200 (75 µm) | ±2% | ±3% |
| Asphalt Content | ±0.45% | ±0.70% |
| Minimum VMA | -0.5% | -1.0% |

b. Range. Control charts for range shall be established to control process variability for the test parameters and Suspension Limits listed below. The range shall be computed for each lot as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of $n = 2$. Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for $n = 3$ and by 1.27 for $n = 4$.

**Control Chart Limits Based on Range
($n = 2$)**

| Sieve | Suspension Limit |
|--------------------|-------------------------|
| 1/2 inch (12.5 mm) | 11% |
| 3/8 inch (9.5 mm) | 11% |
| No. 4 (4.75 mm) | 11% |
| No. 16 (1.18 mm) | 9% |
| No. 50 (300 µm) | 6% |
| No. 200 (75 µm) | 3.5% |
| Asphalt Content | 0.8% |

c. Corrective action. The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain sets of rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

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(1) One point falls outside the Suspension Limit line for individual measurements or range; or

(2) Two points in a row fall outside the Action Limit line for individual measurements.

403-5.6 Quality control (QC) reports. The Contractor shall maintain records and shall submit reports of QC activities daily, in accordance with the CQCP described in Item C-100.

MATERIAL ACCEPTANCE

403-6.1. Quality Assurance Acceptance sampling and testing. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

a. Quality Assurance (QA) testing laboratory. The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

b. Lot Size. A standard lot will be equal to one day's production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day's production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

c. Asphalt air voids. Plant-produced asphalt will be tested for air voids on a subplot basis.

(1) Sampling. Material from each subplot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF.

(2) Testing. Air voids will be determined for each subplot in accordance with ASTM D3203 for a set of compacted specimens prepared in accordance with [ASTM D6926.

d. In-place asphalt mat and joint density. Each subplot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

(1) Sampling. The RPR will cut minimum 5 inches (125 mm) diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

(2) Bond. Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

(3) Thickness. Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each subplot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch (6 mm) less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will

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not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or subplot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

(4) Mat density. One core shall be taken from each subplot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot (30 cm) from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each subplot sample by the TMD for that subplot.

(5) Joint density. One core centered over the longitudinal joint shall be taken for each subplot which contains a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will be the lower of the average TMD values from the adjacent lots.

403-6.2 Acceptance criteria.

a. General. Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, grade and Profilograph smoothness

b. Air voids. Acceptance of each lot of plant produced material for air voids will be based upon the average air void from the sublots. If the average air voids of the lot are equal to or greater than 2% and equal to or less than 5%, then the lot will be acceptable. If the average is below 2% or greater than 5%, the lot shall be removed and replaced at the Contractor's expense.

c. Mat density. Acceptance of each lot of plant produced material for mat density will be based on the average of all of the densities taken from the sublots. If the average mat density of the lot so established equals or exceeds 94%, the lot will be acceptable. If the average mat density of the lot is below 94%, the lot shall be removed and replaced at the Contractor's expense.

d. Joint density. Acceptance of each lot of plant produced asphalt for joint density will be based on the average of all of the joint densities taken from the sublots. If the average joint density of the lot so established equals or exceeds 92%, the lot will be acceptable. If the average joint density of the lot is less than 92%, the Contractor shall stop production and evaluate the method of compacting joints. Production may resume once the reason for poor compaction has been determined and appropriate measures have been taken to ensure proper compaction.

e. Grade. The final finished surface of the pavement of the completed project shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally.

Cross-sections of the pavement shall be taken at a minimum 50-foot (15-m) longitudinal spacing and at all longitudinal grade breaks. Minimum cross-section grade points shall include grade at centerline, ± 10 feet of centerline and edge of taxiway pavement.

The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the subplot shall not be more than 95%.

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f. Profilograph roughness for QA Acceptance. The final profilograph shall be the full length of the project to facilitate testing of roughness between lots. The RPR will perform a profilograph roughness test on the completed project with a profilograph meeting the requirements of ASTM E1274 or a Class I inertial profiler meeting ASTM E950. Data and results shall be provided within 48 hrs of profilograph roughness tests.

The pavement shall have an average profile index less than 15 inches per mile per 1/10 mile. The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate "must grind" bumps and the Profile Index for the pavement using a 0.2-inch (5 mm) blanking band. The bump template must span one inch (25 mm) with an offset of 0.4 inches (10 mm). The profilograph must be calibrated prior to use and operated by a factory or State DOT approved, trained operator. Profilograms shall be recorded on a longitudinal scale of one inch (25 mm) equals 25 feet (7.5 m) and a vertical scale of one inch (25 mm) equals one inch (25 mm). Profilograph shall be performed one foot right and left of project centerline and 15 feet (4.5 m) right and left of project centerline. Any areas that indicate "must grind" shall be corrected with diamond grinding per paragraph 401-4.15 or by removing and replacing full depth of surface course, as directed by the RPR. Where corrections are necessary, a second profilograph run shall be performed to verify that the corrections produced an average profile index of 15 inches per mile per 1/10 mile or less.

403-6.3 Resampling Pavement for Mat Density.

a. General. Resampling of a lot of pavement will only be allowed for mat density and then, only if the Contractor requests same in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the sampling and testing procedures contained in paragraphs 403-6.1. Only one resampling per lot will be permitted.

(1) A redefined mat density will be calculated for the resampled lot. The number of tests used to calculate the redefined mat density will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. Payment for resampled lots. The redefined mat density for a resampled lot will be used to evaluate the acceptance of that lot in accordance with paragraph 403-6.2.

c. Outliers. Check for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and density determined using the remaining test values.

403-6.4 Leveling course. The leveling course is the first variable thickness lift placed to correct surface irregularities prior to placement of subsequent courses. The leveling course shall meet the aggregate gradation in Table 2, paragraph 403-3.3. The leveling course shall meet the requirements of paragraph 403-3.3, 403-6.1b for air voids, but shall not be subject to the density requirements of paragraph 403-6.1c. The leveling course shall be compacted with the same effort used to achieve density of the control strip. The leveling course shall not exceed the maximum lift thickness associated with each gradation in Table 2, paragraph 403-3.3.

METHOD OF MEASUREMENT

403-7.1 Measurement. Plant mix asphalt mix pavement shall be measured by the number of tons (kg) of asphalt pavement used in the accepted work. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage.

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BASIS OF PAYMENT

403-8.1 Payment. Payment for a lot of asphalt mixture meeting all acceptance criteria as specified in paragraph 403-6.2 shall be made at the contract unit price per ton (~~kg~~) for asphalt. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

e. Survey – The contractor is to provide a survey from a professionally licensed surveyor after the completion of the asphalt installation. This is a requirement for payment for the leveling course of asphalt.

f. The overall amount of thickness of levelling course installed in a section shall not exceed the plan thickness (Max 2"). Excess levelling course installed without the approval of the Engineer or RPR will not be paid for.

Payment will be made under:

Item P-403-8.1 Hot Mix Asphalt Pavement (Leveling) - per ton (~~kg~~)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|-----------|---|
| ASTM C29 | Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate |
| ASTM C88 | Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate |
| ASTM C117 | Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing |
| ASTM C127 | Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate |
| ASTM C131 | Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine |
| ASTM C136 | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates |
| ASTM C142 | Standard Test Method for Clay Lumps and Friable Particles in Aggregates |
| ASTM C183 | Standard Practice for Sampling and the Amount of Testing of Hydraulic Cement |
| ASTM C566 | Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying |
| ASTM D75 | Standard Practice for Sampling Aggregates |
| ASTM D242 | Standard Specification for Mineral Filler for Bituminous Paving Mixtures |

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| ASTM D946 | Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction |
| ASTM D979 | Standard Practice for Sampling Bituminous Paving Mixtures |
| ASTM D1073 | Standard Specification for Fine Aggregate for Bituminous Paving Mixtures |
| ASTM D1074 | Standard Test Method for Compressive Strength of Bituminous Mixtures |
| ASTM D1461 | Standard Test Method for Moisture or Volatile Distillates in Bituminous Paving Mixtures |
| ASTM D2041 | Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures |
| ASTM D2172 | Standard Test Method for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures |
| ASTM D2419 | Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate |
| ASTM D2489 | Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures |
| ASTM D2726 | Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures |
| ASTM D2950 | Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods |
| ASTM D3203 | Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures |
| ASTM D3381 | Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials |
| ASTM D4125 | Standard Test Methods for Asphalt Content of Bituminous mixtures by the Nuclear Method |
| ASTM D4318 | Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils |
| ASTM D4552 | Standard Practice for Classifying Hot-Mix Recycling Agents |
| ASTM D4791 | Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate |
| ASTM D4867 | Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures |
| ASTM D5444 | Standard Test Method for Mechanical Size Analysis of Extracted Aggregate |

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| ASTM D5581 | Standard Test Method for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus (6 inch-Diameter Specimen) |
| ASTM D5821 | Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate |
| ASTM D6307 | Standard Test Method for Asphalt Content of Hot-Mix Asphalt by Ignition Method |
| ASTM D6373 | Standard Specification for Performance Graded Asphalt Binder |
| ASTM D6752 | Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method |
| ASTM D6925 | Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave Gyratory Compactor |
| ASTM D6926 | Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus |
| ASTM D6927 | Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures |
| ASTM D6995 | Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm) |
| ASTM E11 | Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves |
| ASTM E178 | Standard Practice for Dealing with Outlying Observations |
| ASTM E2133 | Standard Test Method for Using a Rolling Inclinator to Measure Longitudinal and Transverse Profiles of a Traveled Surface |
| American Association of State Highway and Transportation Officials (AASHTO) | |
| AASHTO M156 | Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures |
| AASHTO T329 | Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method |
| AASHTO T 340 | Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA) |
| Asphalt Institute (AI) | |
| MS-2 | Mix Design Manual, 7th Edition |
| MS-26 | Asphalt Binder Handbook AI State Binder Specification Database |
| FAA Orders | |
| 5300.1 | Modifications to Agency Airport Design, Construction, and Equipment Standards |

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Federal Highway Administration (FHWA)

Long Term Pavement Performance Binder program

Software

FAARFIELD

END OF ITEM P-403

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ITEM P-602 EMULSIFIED ASPHALT PRIME COAT**DESCRIPTION**

602-1.1 This item shall consist of an application of emulsified asphalt material on the prepared base course in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

602-2.1 Emulsified Asphalt material. The emulsified asphalt material shall be as specified in ASTM D3628 for use as a prime coat appropriate to local conditions. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the emulsified asphalt material. The COA shall be provided to and approved by the Resident Project Representative (RPR) before the emulsified asphalt material is applied. The furnishing of the COA for the emulsified asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project. *The designated material for this project is Emulsified Asphalt, SS-1h or SS-1.*

CONSTRUCTION METHODS

602-3.1 Weather limitations. The emulsified asphalt prime coat shall be applied only when the existing surface is dry; the atmospheric temperature is 50°F (10°C) or above, and the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

602-3.2 Equipment. The equipment shall include a self-powered pressure asphalt material distributor and equipment for heating asphalt material.

Provide a distributor with pneumatic tires of such size and number that the load produced on the base surface does not exceed 65.0 psi (~~4.5 kg/sq cm~~) of tire width to prevent rutting, shoving or otherwise damaging the base, surface or other layers in the pavement structure. Design and equip the distributor to spray the asphalt material in a uniform coverage at the specified temperature, at readily determined and controlled rates from 0.05 to 1.0 gallons per square yard (~~0.23 to 4.5 L/square meter~~), with a pressure range of 25 to 75 psi (~~172.4 to 517.1 kPa~~) and with an allowable variation from the specified rate of not more than ±5%, and at variable widths. Include with the distributor equipment a separate power unit for the bitumen pump, full-circulation spray bars, tachometer, pressure gauges, volume-measuring devices, adequate heaters for heating of materials to the proper application temperature, a thermometer for reading the temperature of tank contents, and a hand hose attachment suitable for applying asphalt material manually to areas inaccessible to the distributor. Equip the distributor to circulate and agitate the asphalt material during the heating process. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

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A power broom and power blower suitable for cleaning the surfaces to which the asphalt coat is to be applied shall be provided.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

602-3.3 Application of emulsified asphalt material. Immediately before applying the prime coat, the full width of the surface to be primed shall be swept with a power broom to remove all loose dirt and other objectionable material.

The asphalt emulsion material shall be uniformly applied with an asphalt distributor at the rate of 0.15 to 0.30 gallons per square yard (~~0.68 to 1.36 liters per square meter~~) depending on the base course surface texture. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Following application of the emulsified asphalt material and prior to application of the succeeding layer of pavement, allow the asphalt coat to cure and to obtain evaporation of any volatiles or moisture. Maintain the coated surface until the succeeding layer of pavement is placed, by protecting the surface against damage and by repairing and recoating deficient areas. Allow the prime coat to cure without being disturbed for a period of at least 48 hours or longer, as may be necessary to attain penetration into the treated course. Furnish and spread sand to effectively blot up and cure excess asphalt material. The Contractor shall remove blotting sand prior to asphalt concrete lay down operations at no additional expense to the Owner. Keep traffic off surfaces freshly treated with asphalt material. Provide sufficient warning signs and barricades so that traffic will not travel over freshly treated surfaces.

602-3.4 Trial application rates. The Contractor shall apply a minimum of three lengths of at least 100 feet (30 m) for the full width of the distributor bar to evaluate the amount of emulsified asphalt material that can be satisfactorily applied with the equipment. Apply three different application rates of emulsified asphalt materials within the application range specified in paragraph 602-3.3. Other trial applications can be made using various amounts of material as directed by the RPR. The trial application is to demonstrate the equipment can uniformly apply the emulsified asphalt material within the rates specified and determine the application rate for the project.

602-3.5 Freight and waybills. The Contractor shall submit waybills and delivery tickets during the progress of the work. Before the final estimate is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken. ***Waybills and delivery tickets must be submitted prior to the delivery truck's departure. No waybills and delivery tickets will be accepted after the fact. Any delivery trucks departing prior to submitting their waybill and delivery ticket will not be measured for payment.***

METHOD OF MEASUREMENT

602-4.1 The emulsified asphalt material for prime coat shall be measured by the gallon. Volume shall be corrected to the volume at 60°F (16°C) in accordance with ASTM D4311. The emulsified asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of emulsified asphalt material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas

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where hand spraying of the emulsified asphalt material is necessary. Water added to emulsified asphalt will not be measured for payment.

BASIS OF PAYMENT

602-5.1 Payment shall be made at the contract unit price per gallon for emulsified asphalt prime coat. This price shall be full compensation for furnishing all materials and for all preparation, delivering, and applying the materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item P-602-5.1 Emulsified Asphalt Prime Coat - per gallon

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D2995 Standard Practice for Estimating Application Rate and Residual
Application Rate of Bituminous Distributors

ASTM D3628 Standard Practice for Selection and Use of Emulsified Asphalts

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ITEM P-603 EMULSIFIED ASPHALT TACK COAT**DESCRIPTION**

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 Asphalt materials. The asphalt material shall be an emulsified asphalt as specified in ASTM D3628 as an asphalt application for tack coat appropriate to local conditions. The emulsified asphalt shall not be diluted. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt material to the Resident Project Representative (RPR) before the asphalt material is applied for review and acceptance. The furnishing of COA for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project. ***The designated material for this project is Emulsified Asphalt, SS-1h, or RS-1 or approved equivalent. If RS-1 is used, application temperature must be between 140°F-180°F. To use RS-1 at night, the Contractor must demonstrate, at time of use, that emulsion will break to allow paving in a timely manner.***

CONSTRUCTION METHODS

603-3.1 Weather limitations. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F (10°C) or above; the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

603-3.2 Equipment. The Contractor shall provide equipment for heating and applying the emulsified asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute).

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

The distributor truck shall be equipped with a minimum 12-foot (3.7-m) spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall

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have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

603-3.3 Application of emulsified asphalt material. The emulsified asphalt shall not be diluted. Immediately before applying the emulsified asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The emulsified asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Emulsified Asphalt

| Surface Type | Residual Rate, gal/SY (L/square meter) | Emulsion Application Bar Rate, gal/SY (L/square meter) |
|------------------|---|---|
| New asphalt | 0.02-0.05 (0.09-0.23) | 0.03-0.07 (0.13-0.32) |
| Existing asphalt | 0.04-0.07 (0.18-0.32) | 0.06-0.11 (0.27-0.50) |
| Milled Surface | 0.04-0.08 (0.18-0.36) | .06-0.12 (0.27-0.54) |
| Concrete | 0.03-0.05 (0.13-0.23) | 0.05-0.08 (0.23-0.36) |

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor's expense.

603-3.4 Freight and waybills The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken. ***Waybills and delivery tickets must be submitted prior to the delivery truck's departure. No waybills and delivery***

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tickets will be accepted after the fact. Any delivery trucks departing prior to submitting their waybill and delivery ticket will not be measured for payment.

METHOD OF MEASUREMENT

603-4.1 The emulsified asphalt material for tack coat shall be measured by the gallon. Volume shall be corrected to the volume at 60°F (16°C) in accordance with ASTM D1250. The emulsified asphalt material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of emulsified asphalt material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the emulsified asphalt material is necessary. Water added to emulsified asphalt will not be measured for payment.

BASIS OF PAYMENT

603.5-1 Payment shall be made at the contract unit price per gallon of emulsified asphalt material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-5.1 Emulsified Asphalt Tack Coat – per gallon

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|--|
| ASTM D1250 | Standard Guide for Use of the Petroleum Measurement Tables |
| ASTM D2995 | Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors |
| ASTM D3628 | Standard Practice for Selection and Use of Emulsified Asphalts |

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ITEM P-605 JOINT SEALANTS FOR PAVEMENTS

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

605-1.2 *This item shall also consist of a resilient and adhesive joint sealing filler capable of effectively sealing joints in Portland Cement Concrete pavements and structures. The item shall consist of low modulus silicone sealant in accordance with this section for all concrete pavement.*

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of **ASTM D5893** and as specified or approved equal.

Certification: *The manufacturer of the joint sealant shall furnish certified test results of each lot of the joint sealer material furnished to the project. Each lot of the sealant shall be delivered in containers plainly marked with manufacturer's name or trade mark and lot number.*

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, **name of material, shelf life, storage instructions, mixing instructions**, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

The Joint Sealant Material used for sealing Portland Cement Concrete to Portland Cement Concrete joints and cracks as shown on the plans shall be cold applied, single component, non sag, Dow Corning 888 Silicone Joint Sealant or approved equal.

Silicone sealant (non-acid curing) material shall meet the requirements shown in Table 1.

TABLE 1 - NON-SAG SILICONE SEALANT REQUIREMENT

| <u>Test Method</u> | <u>Test</u> | <u>Material Requirement</u> |
|----------------------------|-------------------------|-----------------------------|
| <u>As Supplied:</u> | | |
| ASTM 2202 | Flow, Maximum | 0.2 |
| ASTM D 1475 | Specific Gravity | 1.450 to 1.515 |
| ASTM C 1183 | Extrusion Rate | 50 Min |

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ASTM 679 Tack-Free Time, Minutes 35 to 75

Upon Complete Cure:

| | | |
|--------------------------|--|-----------------|
| ASTM D 2240 | Durometer ⁽¹⁾ | 15 to 25 |
| ASTM D 412, Die C | Modulus, at 150% Elongation⁽¹⁾, psi, Maximum | 45 |
| ASTM D 412, Die C | Elongation⁽¹⁾, Minimum | 1200 |
| ASTM D 5329 | Adhesion to Concrete, Minimum % Elongation | 500 |

Performance:

| | | |
|---------------------------------|--|---|
| ASTM C 719⁽²⁾ | Movement, 10 Cycles at +100/-50% | No Failure |
| ASTM D 793 | Accelerated Weathering at 5,000 Hours | No Cracks, Blisters or Bond Loss |

(1) Sample cured 7 days at 77 ° F ±2 ° F and 50 ±5% relative humidity. Proper joint design and proper joint preparation are necessary for maximum performance.

(2) Tested on random samples at least on a quarterly basis. The RPR shall have additional tests performed in accordance with ASTM C 719 on random samples taken from material supplied to the work. Material not passing the test shall be removed and replaced at the Contractor's cost.

The Joint Sealant Material used for sealing Portland Cement Concrete to Asphalt Concrete Pavement joints as shown on the plans shall be cold applied, single component, self-leveling, Dow Corning 890-SL Silicone Joint Sealant or approved equal. Silicone sealant (non-acid curing) material shall meet the requirements shown in Table 2.

TABLE 2. SELF LEVELING SILICONE SEALANT REQUIREMENTS

| Test Method | Test | Materials Requirement |
|--------------------|-------------|----------------------------------|
|--------------------|-------------|----------------------------------|

As Supplied:

| | | |
|--------------------|---|---------------------|
| ASTM D 1475 | Specific Gravity | 1.26 to 1.34 |
| ASTM C 1183 | Extrusion Rate | 50 Min |
| CTM 0098 | Skin Over Time, Minutes, Maximum | 60 |
| CTM 0208 | Non-Volatile Content, Minimum | 96 |

Upon Complete Cure:

| | | |
|---|---|-----------------|
| ASTM D 412, Die C (modified) | Elongation⁽¹⁾, % Minimum | 1400 |
| ASTM D 5329 | Joint modulus at 50% elongation⁽¹⁾, psi, Maximum | 7 |
| | Joint modulus at 100% elongation⁽¹⁾, psi, Maximum | 8 |
| | Joint modulus at 150% elongation⁽¹⁾, psi, Maximum | 9 |
| ASTM D 5329 | Adhesion to Asphalt/Concrete⁽¹⁾ elongation | 600 min. |

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Performance:

| | | |
|-------------------|--|---|
| ASTM C 719 | Movement, 10 Cycles at +100/-50% | No Failure |
| ASTM D 793 | Accelerated Weathering at 5,000 Hours | No Cracks, Blisters or Bond Loss |

(1) Sample cured 21 days at 77+/-2°F and 50+/-5% relative humidity. Proper joint design and preparation are necessary for maximum performance.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. *The backer rod shall be a non-moisture absorbing, closed cell polyethylene foam rod that is compatible with the seal material to act as a bond breaker. The backer rod shall be compatible with the sealant and no bond or reaction shall occur between the rod and the sealant. The backer rod shall be of sufficient size per the required joint opening to provide a tight seal that prevent sealant from flowing to the bottom of the joint.* Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint. ***When used with P-606, such as light can installation, P-605 shall not be applied until the P-606 has fully cured.***

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. ***The Contractor shall*** submit a list of proposed equipment to ***the RPR to be*** used in performance of construction work including descriptive data, 30 days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

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b. Concrete saw. *For newly constructed PCC Pavements only.* Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved *by the RPR*, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

~~**f. Hot-poured sealing equipment.** The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double boiler, agitator type kettle with an oil medium in the outer space for heat transfer; a direct connected pressure type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.~~

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints *for newly installed PCC Pavements* shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by **waterblaster** as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. ~~**Waterblasting**~~ Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

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c. **Backer Rod.** When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. **Bond-breaking tape.** Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Silicone Joint Sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before the Contractor begins sealing operations. A backer rod shall be installed as shown on the plans, prior to placement of the joint sealer. The sealant shall be applied in a continuous operation, with an approved mechanical device, and shall adhere to the concrete and be free of voids. The non self-leveling sealant shall then be tooled, with an appropriate tool, to produce a slightly concave surface approximately 1/4 inch below the pavement surface. Tooling shall be accomplished before a skin forms on the surface, usually within ten minutes of application. Tooling is not required for self-leveling sealant.

Immediately preceding, but not more than 50 feet (~~45-m~~) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 inch \pm 1/16 inch (~~2-mm~~) below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

605-3.7 JOINT SEALANT LOCATIONS. *All joints shall be sealed with the size and type joint shown on the project plans, as given in the project specifications or as directed by the RPR. At any location where two impervious materials are in contact and exposed to the environment, the joint between them is to be sealed. This shall include both "new material to new material" and "new material to old material" locations. All sealant materials and construction shall be approved by the Engineer.*

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605-3.8 WARRANTY. *A representative of the joint sealant manufacturer (for all products used) shall visit the job site a sufficient number of times during the sealing operations and after the sealing is completed to certify that the joint sealant was installed in accordance with the manufacturer's recommended methods and procedures. The Contract shall provide a warranty on the material and installation furnished for a minimum of one (1) year from the date of final acceptance.*

605-3.9 ACCEPTANCE CRITERIA

A. *The RPR will perform random adhesion hand pull tests for acceptance of joint sealant installation. These tests are performed to detect application problems such as improper cleaning or improper joint configuration and are performed as described below:*

- *Make a knife cut horizontally from one side of the joint to the other,*
- *Make two vertical cuts (from the horizontal cut) approximately 3 inches long, at both sides of the joint,*
- *Place a mark 1-inch from the bottom of the 3-inch joint sealant tab,*
- *Grasp the 2-inch piece of sealant tab beyond the 1-inch marked portion and pull at a 90 degree angle,*
- *If dissimilar substrates are being sealed, check the adhesion of sealant to each substrate separately.*
- *This is accomplished by extending the vertical cut along one side and then repeating for the other surface,*
- *The adhesion test is considered passing when 1-inch of sealant is elongated to 4-inches without bond loss.*

(For illustration of this procedure, refer to the "Installation Guide - DOW Corning Brand Silicone Pavement Sealants") If a joint sealant installation location does not pass the adhesion hand pull test, the Contractor will be required to replace the sealant to the last acceptable adhesion hand pull test. If deemed necessary by the RPR, the RPR will perform additional adhesion hand pull tests to determine the limits of defective work. All tested areas shall be resealed by the Contractor per installation specifications herein at no additional cost to the Owner.

B. *The Contractor shall be required to perform test cores on portions of the newly installed joint seals. The Contractor will perform a test core every 1,000 linear feet of joint per crew or as instructed by RPR. Transverse and longitudinal joints in general shall require a 1½ -inch diameter core. The actual core size will be based on the minimum core required to include the portion of the joint between the top edges of the beveled edge to a depth of ½ inch below the backer rod. The expansion joint in general shall require a 2½ inch to a 5 inch core drilled to a depth of at least 2 inches below the backer rod. The actual core size will be based on a minimum core size required to include the portion of joint between the top of the beveled edges. The cores shall be analyzed by the RPR to evaluate the Contractor's adherence to the proper joint sealant shape factors as shown on drawings. If the cores indicate unacceptable shape factors, the Contractor will be required to replace the sealant to the last acceptable core. If deemed necessary by the RPR, additional test cores will be required to determine the limits of defective work.*

All cores shall be taken by the Contractor at no cost to the Owner. If the test results indicate satisfactory work is obtained by a crew on a continuous basis, the RPR may reduce the number of cores required from the original frequency of 1,000 linear feet per core for that crew.

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The Contractor shall patch the core holes by preparing the core hole in the same manner as for seal placement. A short section of backer rod shall be coiled in the hole prior to sealant placement. After sealant placement the material shall be tooled to ensure bonding to the entire surface. Core patches shall be included in the unit price for joint sealing; no separate payment will be made.

METHOD OF MEASUREMENT

605-4.1 No measurement will be made for direct payment of any joint sealants as the cost of the joint sealants shall be considered as subsidiary to the items requiring joint sealants.

BASIS OF PAYMENT

605-5.1 There will be no separate payment for Joint Sealants. All costs shall be incidental to the items requiring joint sealants.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|---|
| ASTM D789 | Standard Test Method for Determination of Relative Viscosity of Polyamide (PA) |
| ASTM D5249 | Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints |
| ASTM D5893 | Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements |
| ASTM D6690 | Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt |
| ASTM D7116 | Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements |

Advisory Circulars (AC)

| | |
|----------------|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
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**ITEM P-606 ADHESIVE COMPOUNDS, TWO-COMPONENT FOR SEALING WIRE
AND LIGHTS IN PAVEMENT****DESCRIPTION**

606-1.1 This specification covers two types of material; a liquid suitable for sealing electrical wire in saw cuts in pavement and for sealing light fixtures or bases in pavement, and a paste suitable for embedding light fixtures in the pavement. Both types of material are two-component filled formulas with the characteristics specified in paragraph 606-2.4. Materials supplied for use with asphalt and/or concrete pavements must be formulated so they are compatible with the asphalt and/or concrete.

MATERIALS

606-2.1 Curing. When pre-warmed to 77°F (25°C), mixed, and placed in accordance with manufacturer's directions, the materials shall cure at temperatures of 45°F (7°C) or above without the application of external heat.

606-2.2 Storage. The adhesive components shall not be stored at temperatures over 86°F (30°C), unless otherwise specified by the manufacturer.

606-2.3 Caution. Installation and use shall be in accordance with the manufacturer's recommended procedures. Avoid prolonged or repeated contact with skin. In case of contact, wash with soap and flush with water. If taken internally, call doctor. Keep away from heat or flame. Avoid vapor. Use in well-ventilated areas. Keep in cool place. Keep away from children.

606-2.4 Characteristics. When mixed and cured in accordance with the manufacturer's directions, the materials shall have the following properties shown in Table 1.

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Table 1. Property Requirements

| Physical or Electrical Property | Minimum | Maximum | ASTM Method |
|--|----------------------------|-----------------------|-------------|
| Tensile | | | |
| Portland cement concrete | 1,000 psi (70 kg/sq cm) | | D 638 |
| Asphalt concrete | 500 psi (35 kg/sq cm) | | |
| Elongation | | | |
| Portland cement concrete | | See note ¹ | D 638 |
| Asphalt concrete | 50% | | D 638 |
| Coef. of cub. exp. cu. cm/cu. cm/°C | 0.00090 | 0.00120 | D 1168 |
| Coef. of lin. exp. cm/cm/°C | 0.000030 | 0.000040 | D 1168 |
| Dielectric strength, short time test | 350 volts/mil. | | D 149 |
| Arc resistance | 125 sec | | |
| Pull-off | | | |
| Adhesion to steel | 1,000 psi (70 kg/sq cm) | | |
| Adhesion to Portland cement concrete | 200 psi (14 kg/sq cm) | | |
| Adhesion to asphalt concrete | No test available. | | |
| Adhesion to aluminum | 250 psi | | |

¹ 20% or more (without filler) for formulations to be supplied for areas subject to freezing.

SAMPLING, INSPECTION, AND TEST PROCEDURES

606-3.1 Tensile properties. Tests for tensile strength and elongation shall be conducted in accordance with ASTM D638.

606-3.2 Expansion. Tests for coefficients of linear and cubical expansion shall be conducted in accordance with, Method B, except that mercury shall be used instead of glycerine. The test specimen shall be mixed in the proportions specified by the manufacturer, and cured in a glass tub approximately 2 inch (50 mm) long by 3/8 inch (9 mm) in diameter. The interior of the tube shall be precoated with a silicone mold release agent. The hardened sample shall be removed from the tube and aged at room temperature for one (1) week before conducting the test. The test temperature range shall be from 35°F (2°C) to 140°F (60°C).

606-3.3 Test for dielectric strength. Test for dielectric strength shall be conducted in accordance with ASTM D149 for sealing compounds to be furnished for sealing electrical wires in pavement.

606-3.4 Test for arc resistance. Test for arc resistance shall be conducted for sealing compounds to be furnished for sealing electrical wires in pavement.

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606-3.5 Test for adhesion to steel. The ends of two smooth, clean, steel specimens of convenient size (1 inch by 1 inch by 6 inch) (25 mm by 25 mm by 150 mm) would be satisfactory when bonded together with adhesive mixture and allowed to cure at room temperature for a period of time to meet formulation requirements and then tested to failure on a Riehle (or similar) tensile tester. The thickness of adhesive to be tested shall be 1/4 inch (6 mm).

606-3.6 Adhesion to Portland cement concrete

a. Concrete test block preparation. The aggregate grading shall be as shown in Table 2.

The coarse aggregate shall consist of crushed rock having a minimum of 75% of the particles with at least one fractured face and having a water absorption of not more than 1.5%. The fine aggregate shall consist of crushed sand manufactured from the same parent rock as the coarse aggregate. The concrete shall have a water-cement ratio of 5.5 gallons (21 liters) of water per bag of cement, a cement factor of 6, ± 0.5 , bags of cement per cubic yard (0.76 cubic meter) of concrete, and a slump of 2-1/2 inch (60 mm), $\pm 1/2$ inch (60 mm ± 12 mm). The ratio of fine aggregate to total aggregate shall be approximately 40% by solid volume. The air content shall be 5.0%, $\pm 0.5\%$, and it shall be obtained by the addition to the batch of an air-entraining admixture such as Vinsol® resin. The mold shall be of metal and shall be provided with a metal base plate.

Means shall be provided for securing the base plate to the mold. The assembled mold and base plate shall be watertight and shall be oiled with mineral oil before use. The inside measurement of the mold shall be such that several one inch (25 mm) by 2-inch (75 mm) by 3-inch (25 mm by 50 mm by 75 mm) test blocks can be cut from the specimen with a concrete saw having a diamond blade. The concrete shall be prepared and cured in accordance with ASTM C192.

Table 2. Aggregate For Bond Test Blocks

| Type | Sieve Size | Percent Passing |
|-------------------------|--|-----------------|
| Coarse Aggregate | 3/4 inch (19 mm) | 97 to 100 |
| | 1/2 inch (12 mm) | 63 to 69 |
| | 3/8 inch (9 mm) | 30 to 36 |
| | No. 4 (4.75 mm) | 0 to 3 |
| Fine Aggregate | No. 4 (4.75 mm) | 100 |
| | No. 8 (2.36 mm) | 82 to 88 |
| | No. 16 (1.18 mm) | 60 to 70 |
| | No. 30 (600 μm) | 40 to 50 |
| | No. 50 (300 μm) | 16 to 26 |
| | No. 100 (150 μm) | 5 to 9 |

b. Bond test. Prior to use, oven-dry the test blocks to constant weight at a temperature of 220°F to 230°F (104°C to 110°C), cool to room temperature, 73.4°F $\pm 3^\circ$ F (23°C $\pm 1.6^\circ$ C), in a desiccator, and clean the surface of the blocks of film or powder by vigorous brushing with a stiff-bristled fiber brush. Two test blocks shall be bonded together on the one inch by 3 inch (25 mm by 75 mm) sawed face with the adhesive mixture and allowed to cure at room temperature for a period of time to meet formulation requirements and then tested to failure in a Riehle (or similar) tensile tester. The thickness of the adhesive to be tested shall be 1/4 inch (6 mm).

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606-3.7 Compatibility with asphalt mix. Test for compatibility with asphalt in accordance with ASTM D5329.

606-3.8 Adhesive compounds - Contractor's responsibility. The Contractor shall furnish the vendor's certified test reports for each batch of material delivered to the project. The report shall certify that the material meets specification requirements and is suitable for use with concrete and/or asphalt concrete pavements. The report shall be provided to and accepted by the Resident Project Representative (RPR) before use of the material. In addition, the Contractor shall obtain a statement from the supplier or manufacturer that guarantees the material for one year. The supplier or manufacturer shall furnish evidence that the material has performed satisfactorily on other projects.

606-3.9 Application. Adhesive shall be applied on a dry, clean surface, free of grease, dust, and other loose particles. The method of mixing and application shall be in strict accordance with the manufacturer's recommendations. When used with Item P-605, such as light can installation, Item P-605 shall not be applied until the Item P-606 has fully cured.

METHOD OF MEASUREMENT

606-4.1 *No measurement will be made for direct payment of any adhesive compounds as the cost of the adhesive compounds shall be considered as subsidiary to the items requiring adhesive compound.*

BASIS OF PAYMENT

606-5.1 *There will be no separate payment for Adhesive Compounds. All costs shall be incidental to the items requiring adhesive compounds.*

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|--|
| ASTM C192 | Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory |
| ASTM D149 | Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies |
| ASTM D638 | Standard Test Method for Tensile Properties of Plastics |
| ASTM D5329 | Standard Test Methods for Sealants and Fillers, Hot-applied, for Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements |

END OF ITEM P-606

P-606-4

**ADHESIVE COMPOUNDS, TWO-COMPONENT FOR
SEALING WIRE AND LIGHTS IN PAVEMENT**

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610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

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Coarse Aggregate Grading Requirements

| Maximum Aggregate Size | ASTM C33, Table 3 Grading Requirements (Size No.) |
|-------------------------------|--|
| 1 1/2 inch (37.5 mm) | 467 or 4 and 67 |
| 1 inch (25 mm) | 57 |
| 3/4 inch (19 mm) | 67 |
| 1/2 inch (12.5 mm) | 7 |

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking. *Aggregates that have a history of D-cracking shall not be used.*

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of ASTM C150 - Type I

The chemical requirements for all cement types specified should meet suitable criteria for deleterious activity. Low alkali cements (less than 0.6% equivalent alkalis).

Total Alkalies (Na₂O and K₂O) of the cement secured for the production of concrete shall be independently verified in accordance with ASTM C114 or ASTM C1365.

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 13% and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

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a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding, and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

610-2.8 Premolded joint material. Premolded joint material for expansion joints shall meet the requirements of ASTM 1752.

610-2.9 Joint filler. The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.

610-2.10 Steel reinforcement. *Reinforcing shall consist of Grade 60 deformed bars conforming to the requirements of ASTM A615, ASTM A706, ASTM A775 & ASTM A934 and/or welded steel wire fabric conforming to the requirements of ASTM A1064.* Reinforcing shall consist of conforming to the requirements of .

610-2.11 Materials for curing concrete. *Curing materials shall conform to one or more of the following specifications:* Curing materials shall conform to .

Materials for Curing

| | |
|--|------------------|
| Waterproof paper | ASTM C171 |
| Clear or white Polyethylene Sheeting | ASTM C171 |
| White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B | ASTM C309 |

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of 4000 psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (~~280 kg per cubic meter~~). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

Concrete produced by a reputable local supplier of ready-mix or transit mix concrete designed for a minimum compressive strength of 4,000 psi or as given in the project

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plans, may be used when approved by the Engineer. The Contractor shall submit the ready mix or transit mix design to the Engineer at least 30-days prior to use of concrete on the project.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved

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by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85°F (30 °C), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The **Contractor** RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall prepare six test specimens for each day's pour. The Contractor shall provide adequate facilities for the initial curing of cylinders. ***The Contractor shall retain three specimens for quality control (QC) testing and deliver to the QA laboratory three specimens. QC and QA testing of the specimens shall occur at 3 days, 7 days and 28 days.***

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

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METHOD OF MEASUREMENT

610-5.1 P-610 concrete for the Blast Fence Foundation and Concrete Collar for Fiber Optic Pull Box shall be measured in CY.

BASIS OF PAYMENT

610-6.1 This price shall be full compensation for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

There shall be no separate payment for the Concrete for all Miscellaneous Structures other than those listed in the Pay Items below, all costs including furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete these other items shall be incidental to the items requiring Concrete for Miscellaneous Structures.

Item P-610-6.1 Reinforced Concrete Foundation for Blast Fence – per Cubic Yard.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|--|
| ASTM A184 | Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement |
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
| ASTM A704 | Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement |
| ASTM A706 | Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement |
| ASTM A775 | Standard Specification for Epoxy-Coated Steel Reinforcing Bars |
| ASTM A884 | Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement |
| ASTM A934 | Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars |
| ASTM A1064 | Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete |
| ASTM C31 | Standard Practice for Making and Curing Concrete Test Specimens in the Field |
| ASTM C33 | Standard Specification for Concrete Aggregates |
| ASTM C39 | Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens |

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| | |
|------------|--|
| ASTM C94 | Standard Specification for Ready-Mixed Concrete |
| ASTM C136 | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates |
| ASTM C114 | Standard Test Methods for Chemical Analysis of Hydraulic Cement |
| ASTM C136 | Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates |
| ASTM C143 | Standard Test Method for Slump of Hydraulic-Cement Concrete |
| ASTM C150 | Standard Specification for Portland Cement |
| ASTM C171 | Standard Specification for Sheet Materials for Curing Concrete |
| ASTM C172 | Standard Practice for Sampling Freshly Mixed Concrete |
| ASTM C231 | Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method |
| ASTM C260 | Standard Specification for Air-Entraining Admixtures for Concrete |
| ASTM C309 | Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete |
| ASTM C311 | Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete |
| ASTM C494 | Standard Specification for Chemical Admixtures for Concrete |
| ASTM C618 | Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete |
| ASTM C666 | Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing |
| ASTM C685 | Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing |
| ASTM C989 | Standard Specification for Slag Cement for Use in Concrete and Mortars |
| ASTM C1017 | Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete |
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation |
| ASTM C1157 | Standard Performance Specification for Hydraulic Cement |
| ASTM C1260 | Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method) |
| ASTM C1365 | <u>Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis</u> |
| ASTM C1602 | Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete |

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**ASTM D1751 Standard Specification for Preformed Expansion Joint Filler for
Concrete Paving and Structural Construction (Nonextruding and
Resilient Asphalt Types)**

**ASTM D1752 Standard Specification for Preformed Sponge Rubber Cork and
Recycled PVC Expansion Joint Fillers for Concrete Paving and
Structural Construction**

American Concrete Institute (ACI)

ACI 305R Hot Weather Concreting

ACI 306R Cold Weather Concreting

ACI 308R Guide to External Curing of Concrete

ACI 309R Guide for Consolidation of Concrete

END OF ITEM P-610

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ITEM P-620 RUNWAY AND TAXIWAY MARKING**DESCRIPTION**

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms "paint" and "marking material" as well as "painting" and "application of markings" are interchangeable throughout this specification. ***Where applicable, The Contractor comply with best practices as published by the Innovative Pavement Research Foundation Report 01-G-002-05-1 title Airfield Markings Handbook, September 2008 unless otherwise approved by the Engineer.***

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer's certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer's surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 Marking materials.**Table 1. Marking Materials**

| Paint ¹ | | | | Glass Beads ² | |
|--------------------|----------------|---------------------|---------------------------|--------------------------|--------------------------|
| Type | Color | Fed Std. 595 Number | Application Rate Maximum | Type | Application Rate Minimum |
| II | White (Final) | 37925 | 115 ft ² /gal | III | 10 lb/gal |
| II | White (Temp) | 37925 | 57.5 ft ² /gal | I | 7 lb/gal |
| II | Red (Final) | 31136 | 115 ft ² /gal | I | 5 lb/gal |
| II | Red (Temp) | 31136 | 57.5 ft ² /gal | - | - |
| II | Yellow (Final) | 33538 or 33655 | 115 ft ² /gal | III | 10 lb/gal |
| II | Yellow (Temp) | 33538 or 33655 | 57.5 ft ² /gal | I | 7 lb/gal |
| II | Black | 37038 | 115 ft ² /gal | - | - |

¹ See paragraph 620-2.2a² See paragraph 620-2.2b

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a. **Paint.** Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

Black outlining is required for this project unless shown otherwise by the Project Plans.

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

b. **Reflective media.** Glass beads for ***all permanent*** white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type III, Gradation A. Glass beads for permanent red and pink paint shall meet the requirements for Type I, Gradation A, ***except for zipper markings, which shall receive Type III glass beads. Glass beads for temporary white and yellow paint shall meet the requirements of Federal Specification TT-B-1325D Type I, Gradation A.***

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

620-2.3 Biocide Additive. A biocide additive will be required to be included at the time of manufacture that resists algae growth on the coating. Biocide shall meet or exceed that of Safety Coatings of Foley, Alabama. The Contractor shall submit biocide data to the Engineer for prior approval. Mixing concentrations shall be in accordance with the paint manufacturer's recommendations and shall not, in any way, diminish the warranty of the paint.

CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall ***be designed so as to*** apply markings of uniform cross-sections and clear-cut edges without running or spattering ~~and without over-spray.~~ ***within the limits for***

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straightness set forth herein. Refer to paragraph 620-3.5 for application. The marking equipment for both paint and beads shall be calibrated daily.

Suitable adjustments shall be provided on the sprayer(s) of a single machine or by furnishing additional equipment for painting the width required.

The Contractor shall provide the necessary airfield stencils that have been approved by the Owner to paint the surface painted signs and taxiway location signs as indicated in the plans.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminants that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. ***Extreme care shall be taken not to damage the pavement.*** The area to be painted shall be cleaned by broom, blower, ~~water blasting~~, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, ~~water blasting~~, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings. ***Coatings will be incidental to this work.***

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufacturers application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

New pavement markings should never be painted over the top of existing, permanent pavement markings.

Markings to be removed and repainted shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the new paint and the existing paint. The areas to be painted shall be cleaned by pressure washing or by other methods approved by the Engineer, as required to remove all dirt, laitance, and loose materials.

Prior to each working day, the Contractor shall calibrate the application equipment and provide evidence of that calibration to the RPR. Twice daily, or as directed by the RPR, the Contractor shall test the day's production for thickness and reflectivity. All testing results shall be provided to the RPR/Engineer at the end of each day's production.

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620-3.4 Layout of markings. The proposed markings shall be laid out *by the Contractor with a licensed land surveyor registered in the state of Florida* in advance of the paint application. *The Contractor shall provide an experienced technician to supervise the location, alignment, layout, dimensions, and application of the paint. Prior to the markings being laid out in the field, the Contractor and marking Subcontractor shall attend a pre-activity meeting with the Airport, RPR and Engineer.* The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout *has been performed by a licensed surveyor* and *the* condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

| Dimension and Spacing | Tolerance |
|---|-------------------|
| 36 inch (910 mm) or less | ±1/2 inch (12 mm) |
| greater than 36 inch to 6 feet (910 mm to 1.85 m) | ±1 inch (25 mm) |
| greater than 6 feet to 60 feet (1.85 m to 18.3 m) | ±2 inch (50 mm) |
| greater than 60 feet (18.3 m) | ±3 inch (76 mm) |

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted. ***Subject to the overall scheduling requirements, the Contractor shall allow the maximum time to elapse after paving to allow the asphalt to oxidize prior to any permanent painting.***

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

A layer (one coat) of temporary paint, with glass beads as noted in Table 1, shall be applied twenty-four (24) hours after placement of bituminous pavements to allow the prompt re-opening of pavements to aircraft traffic. However, the paint shall not bleed, curl, or discolor when applied. A permanent layer of paint with glass beads shall be applied at the end of the project on top of the temporary markings layer. Black outline shall not be applied for temporary paint.

At no point should any paint be applied to the grass adjacent to the pavement edge.

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620-3.6 Application—preformed thermoplastic airport pavement markings. Preformed thermoplastic pavement markings not used.

620-3.7 Control strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance. **Thickness shall be in the range of 12-18 mil and reflectivity measurement shall comply with paragraph 620-2.2**

620-3.8 Retro-reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30% of each other.

Minimum Retro-Reflectance Values

| Material | Retro-reflectance mcd/m ² /lux | | |
|---|---|--------|-----|
| | White | Yellow | Red |
| Initial Type I | 300 | 175 | 35 |
| Initial Type III | 600 | 300 | 35 |
| Initial Thermoplastic | 225 | 100 | 35 |
| All materials, remark when less than ¹ | 100 | 75 | 10 |

¹ Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations. **Any excess paint outside the limits of markings, including splatters, splashes, spillage, or drippings of paint shall be removed through grinding. Any existing markings to remain that are damaged from Contractor's operations shall be re-painted at the Contractor's expense.**

620-3.10 Stencils. In advance of any marking operations, the Contractor shall submit for review by the Engineer the stencils to be employed for the installation of surface painted signs.

620-3.11 Surfaces to receive new markings. The Contractor shall not apply new markings over newly applied paint. For example, black borders shall not be applied the full width of the marking, then apply yellow markings to achieve black border requirements.

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620-3.12 As-Built Survey. *At the completion of each work area, the Contractor shall provide as-built evidence prepared by a State of Florida licensed land surveyor demonstrating that newly installed markings comply with the dimensions provided in the Contract Documents. Additionally, the Contractor shall produce testing results for applied thickness and reflectivity. No payment to the Contractor shall be made until such documentation is produced and provided to the Engineer for approval newly installed markings that do not satisfy the required dimensions, thickness or reflectivity shall be removed and reinstalled by the Contractor. Such removal and reinstallation shall be at the expense of the Contractor.*

METHOD OF MEASUREMENT

620-4.1 The quantity of runway and taxiway markings to be paid for shall be the number of square feet of painting including reflective media performed and installed in accordance with the specifications and accepted by the RPR. The quantity of runway and taxiway paint removal shall be paid for by the number of square feet removed and accepted by the RPR. Measurement of markings removed and installed shall occur in the presence of both the Contractor and RPR.

BASIS OF PAYMENT

620-5.1 Payment shall be made at the respective contract price per square foot for runway and taxiway painting. Payment shall be made at the respective contract price per square foot for runway and taxiway paint removal. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, reflective media, testing, layout, surface cleaning and incidentals necessary to complete the item.

Payment will be made under:

- | | |
|----------------|---|
| Item P-620-5.1 | Permanent Airfield Painting with Type III Glass Beads (Yellow, White) - per Square Foot |
| Item P-620-5.2 | Permanent Airfield Painting with Type I Glass Beads (Red Surface Painted Signs) – per Square Foot |
| Item P-620-5.3 | Permanent Airfield Painting with No Glass Beads (Black) – per Square Foot |
| Item P-620-5.4 | Temporary Airfield Painting with Type I Glass Beads (Yellow and White) – per Square Foot |
| Item P-620-5.5 | Temporary Airfield Painting with No Glass Beads (Red Surface Painted Signs) – per Square Foot |
| Item P-620-5.6 | Airfield Paint Removal – per Square Foot |

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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|------------|---|
| ASTM D476 | Standard Classification for Dry Pigmentary Titanium Dioxide Products |
| ASTM D968 | Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive |
| ASTM D1652 | Standard Test Method for Epoxy Content of Epoxy Resins |
| ASTM D2074 | Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method |
| ASTM D2240 | Standard Test Method for Rubber Property - Durometer Hardness |
| ASTM D7585 | Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments |
| ASTM E303 | Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester |
| ASTM E1710 | Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer |
| ASTM E2302 | Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer |
| ASTM G154 | Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials |

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24

Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings

29 CFR Part 1910.1200 Hazard Communication

Federal Specifications (FED SPEC)

| | |
|---------------------|---|
| FED SPEC TT-B-1325D | Beads (Glass Spheres) Retro-Reflective |
| FED SPEC TT-P-1952F | Paint, Traffic and Airfield Marking, Waterborne |
| FED STD 595 | Colors used in Government Procurement |

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Commercial Item Description

A-A-2886B Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1 Standards for Airport Markings

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport
Pavement Surfaces

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ITEM T-904 SODDING

DESCRIPTION

904-1.1 This item shall consist of furnishing, hauling, and placing approved live sod on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the RPR. ***Any haul routes or other disturbances by the Contractor will be repaired at the Contractor's expense.***

MATERIALS

904-2.1 Sod. Sod furnished by the Contractor shall have a good cover of living or growing grass. This shall be interpreted to include grass that is seasonally dormant during the cold or dry seasons and capable of renewing growth after the dormant period. All sod shall be obtained from areas where the soil is reasonably fertile and contains a high percentage of loamy topsoil. Sod shall be cut or stripped from living, thickly matted turf relatively free of weeds or other undesirable foreign plants, large stones, roots, or other materials that might be detrimental to the development of the sod or to future maintenance. At least 70% of the plants in the cut sod shall be composed of the species stated in the special provisions, and any vegetation more than 6 inches (150 mm) in height shall be mowed to a height of 3 inches (75 mm) or less before sod is lifted. Sod, including the soil containing the roots and the plant growth showing above, shall be cut uniformly to a thickness not less than **2" include ¾" thick layer of roots with soil.** ~~that stated in the special provisions.~~

904-2.2 Lime. Lime shall be ground limestone containing not less than 85% of total carbonates, and shall be ground to such fineness that 90% will pass through a No. 20 (850 µm) mesh sieve and 50% will pass through a No. 100 (150 µm) mesh sieve. Coarser material will be acceptable, providing the rates of application are increased to provide not less than the minimum quantities and depth specified in the special provisions on the basis of the two sieve requirements above. Dolomitic lime or a high magnesium lime shall contain at least 10% of magnesium oxide. Lime shall be applied at the rate of 500 lbs/acre. All liming materials shall conform to the requirements of ASTM C602.

904-2.3 Fertilizer. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They shall be applied at the rate and to the depth specified, and shall meet the requirements of ***Federal Spec A-A-1909 and*** applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

- a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;
- b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or
- c. A granular or pellet form suitable for application by blower equipment.

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Fertilizers shall be **10-10-10** commercial fertilizer and shall be spread at the rate of **500 lbs/acre**.

904-2.4 Water. The water shall be sufficiently free from oil, acid, alkali, salt, or other harmful materials that would inhibit the growth of grass.

904-2.5 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the RPR before being placed.

CONSTRUCTION METHODS

904-3.1 General. Areas to be solid, strip, or spot sodded shall be shown on the plans. Areas requiring special ground surface preparation such as tilling and those areas in a satisfactory condition that are to remain undisturbed shall also be shown on the plans.

Suitable equipment necessary for proper preparation of the ground surface and for the handling and placing of all required materials shall be on hand, in good condition, and shall be approved by the RPR before the various operations are started. The Contractor shall demonstrate to the RPR before starting the various operations that the application of required materials will be made at the specified rates.

904-3.2 Preparing the ground surface. After grading of areas has been completed and before applying fertilizer and limestone, areas to be sodded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris which might interfere with sodding, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes occurs after grading of areas and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage. This may include filling gullies, smoothing irregularities, and repairing other incidental damage.

In areas where sod is specified to be placed against existing pavements, the Contractor shall shape the receiving ground surface to achieve a 1-1/2" drop-off from the existing pavement edge to the top of the sod mat. Sod mat is assumed to be 2 inches thick. No separate payment shall be made for the reshaping of the receiving surface. All work associated with the reshaping of the receiving surface to achieve the 1-1/2" drop-off is considered incidental to item T-904-1.

904-3.3 Applying fertilizer and ground limestone. Following ground surface preparation, fertilizer shall be uniformly spread at a rate which will provide not less than the minimum quantity of each fertilizer ingredient, as stated in the special provisions. If use of ground limestone is required, it shall then be spread at a rate that will provide not less than the minimum quantity stated in the special provisions. These materials shall be incorporated into the soil to a depth of not less than 2 inches (50 mm) by discing, raking, or other suitable methods. Any stones larger than 2 inches (50 mm) in any diameter, large clods, roots, and other litter brought to the surface by this operation shall be removed.

904-3.4 Obtaining and delivering sod. After inspection and approval of the source of sod by the RPR, the sod shall be cut with approved sod cutters to such a thickness that after it has been transported and placed on the prepared bed, but before it has been compacted, it shall

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have a uniform thickness of not less than 2 inches (50 mm). Sod sections or strips shall be cut in uniform widths, not less than 10 inches (250 mm), and in lengths of not less than 18 inches (0.5 m), but of such length as may be readily lifted without breaking, tearing, or loss of soil. Where strips are required, the sod must be rolled without damage with the grass folded inside. The Contractor may be required to mow high grass before cutting sod.

The sod shall be transplanted within 24 hours from the time it is stripped, unless circumstances beyond the Contractor's control make storing necessary. In such cases, sod shall be stacked, kept moist, and protected from exposure to the air and sun and shall be kept from freezing. Sod shall be cut and moved only when the soil moisture conditions are such that favorable results can be expected. Where the soil is too dry, approval to cut sod may be granted only after it has been watered sufficiently to moisten the soil to the depth the sod is to be cut.

904-3.5 Laying sod. Sodding shall be performed only during the seasons when satisfactory results can be expected. Frozen sod shall not be used and sod shall not be placed upon frozen soil. Sod may be transplanted during periods of drought with the approval of the RPR, provided the sod bed is watered to moisten the soil to a depth of at least 4 inches (100 mm) immediately prior to laying the sod.

The sod shall be moist and shall be placed on a moist earth bed. Pitch forks shall not be used to handle sod, and dumping from vehicles shall not be permitted. The sod shall be carefully placed by hand, edge to edge and with staggered joints, in rows at right angles to the slopes, commencing at the base of the area to be sodded and working upward. The sod shall immediately be pressed firmly into contact with the sod bed by tamping or rolling with approved equipment to provide a true and even surface, and ensure knitting without displacement of the sod or deformation of the surfaces of sodded areas. Where the sod may be displaced during sodding operations, the workmen, when replacing it, shall work from ladders or treaded planks to prevent further displacement. Screened soil of good quality shall be used to fill all cracks between sods. The quantity of the fill soil shall not cause smothering of the grass. Where the grades are such that the flow of water will be from paved surfaces across sodded areas, the surface of the soil in the sod after compaction shall be set approximately one inch (25 mm) below the pavement edge. Where the flow will be over the sodded areas and onto the paved surfaces around manholes and inlets, the surface of the soil in the sod after compaction shall be placed flush with pavement edges.

On slopes steeper than one (1) vertical to 2-1/2 horizontal and in v-shaped or flat-bottom ditches or gutters, the sod shall be pegged with wooden pegs not less than 12 inches (300 mm) in length and have a cross-sectional area of not less than 3/4 sq inch (18 sq mm). The pegs shall be driven flush with the surface of the sod.

904-3.6 Watering. Adequate water and watering equipment must be on hand before sodding begins, and sod shall be kept moist until it has become established and its continued growth assured. In all cases, watering shall be done in a manner that will avoid erosion from the application of excessive quantities and will avoid damage to the finished surface. ***The Contractor will be required to water sodded areas a minimum of three (3) times per week until sod is well established as determined by the RPR. All cost for watering, including supplying the water, shall be included in the unit bid price for the sod. Depending on weather conditions, the need for watering may be waived by the RPR.***

904-3.7 Establishing turf. The Contractor shall provide general care for the sodded areas as soon as the sod has been laid and shall continue until final inspection and acceptance of the work. All sodded areas shall be protected against traffic or other use by warning signs or

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barricades approved by the RPR. The Contractor shall mow the sodded areas with approved mowing equipment, depending upon climatic and growth conditions and the needs for mowing specific areas. Weeds or other undesirable vegetation shall be mowed and the clippings raked and removed from the area.

904-3.8 Repairing. When the surface has become gullied or otherwise damaged during the period covered by this contract, the affected areas shall be repaired to re-establish the grade and the condition of the soil, as directed by the RPR, and shall then be sodded as specified in paragraph 904-3.5.

904-3.9 ELEVATION OF SOD. *The top elevation of the sod when placed next to new or existing asphalt or concrete pavement shall have a 1-1/2" drop from the pavement edge. When sod is placed adjacent to new or existing concrete sign bases, light can bases, junction cans, manholes, other concrete slabs, etc., the drop shall be from zero to 1" maximum. When sod is placed around new or existing inlets or other drainage structures, sod is to be flush with the concrete of the structure, so drainage flow is not blocked. The top of the sod mat is assumed to be the top of the root mass.*

METHOD OF MEASUREMENT

904-4.1 This item shall be measured on the basis of the area in square yards (~~square meters~~) of the surface covered with sod and accepted.

BASIS OF PAYMENT

904-5.1 This item will be paid for on the basis of the contract unit price per square yard (~~square meter~~) for sodding, which price shall be full compensation for all labor, equipment, material, staking, and incidentals necessary to satisfactorily complete the items as specified.

Payment will be made under:

Item T-904-5.1 Sodding - per square yard (~~square meter~~)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C602 Standard Specification for Agricultural Liming Materials

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-904

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ITEM T-905 TOPSOIL**DESCRIPTION**

905-1.1 This item shall consist of preparing the ground surface for topsoil application, removing topsoil from designated stockpiles or areas to be stripped on the site or from approved sources off the site, and placing and spreading the topsoil on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the RPR.

MATERIALS

905-2.1 Topsoil. Topsoil shall be the surface layer of soil with no admixture of refuse or any material toxic to plant growth, and it shall be reasonably free from subsoil and stumps, roots, brush, stones (2 inches (50 mm) or more in diameter), and clay lumps or similar objects. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed. Ordinary sod and herbaceous growth such as grass and weeds are not to be removed, but shall be thoroughly broken up and intermixed with the soil during handling operations. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means, shall be removed. The topsoil or soil mixture, unless otherwise specified or approved, shall have a pH range of approximately 5.5 pH to 7.6 pH, when tested in accordance with the methods of testing of the Association of Official Agricultural Chemists in effect on the date of invitation of bids. The organic content shall be not less than 3% nor more than 20% as determined by the wet-combustion method (chromic acid reduction). There shall be not less than 20% nor more than 80% of the material passing the 200 mesh (75 µm) sieve as determined by the wash test in accordance with ASTM C117.

Natural topsoil may be amended by the Contractor with approved materials and methods to meet the above specifications.

905-2.2 Inspection and tests. Within 10 days following acceptance of the bid, the RPR shall be notified of the source of topsoil to be furnished by the Contractor. The topsoil shall be inspected to determine if the selected soil meets the requirements specified and to determine the depth to which stripping will be permitted. At this time, the Contractor may be required to take representative soil samples from several locations within the area under consideration and to the proposed stripping depths, for testing purposes as specified in paragraph 905-2.1.

CONSTRUCTION METHODS

905-3.1 General. Areas to be topsoiled shall be shown on the plans. If topsoil is available on the site, the location of the stockpiles or areas to be stripped of topsoil and the stripping depths shall be shown on the plans.

Suitable equipment necessary for proper preparation and treatment of the ground surface, stripping of topsoil, and for the handling and placing of all required materials shall be on hand, in good condition, and approved by the RPR before the various operations are started.

905-3.2 Preparing the ground surface. Immediately prior to dumping and spreading the topsoil on any area, the surface shall be loosened by discs or spike-tooth harrows, or by other

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means approved by the RPR, to a minimum depth of 2 inches (50 mm) to facilitate bonding of the topsoil to the covered subgrade soil. The surface of the area to be topsoiled shall be cleared of all stones larger than 2 inches (50 mm) in any diameter and all litter or other material which may be detrimental to proper bonding, the rise of capillary moisture, or the proper growth of the desired planting. Limited areas, as shown on the plans, which are too compact to respond to these operations shall receive special scarification.

Grades on the area to be topsoiled, which have been established by others as shown on the plans, shall be maintained in a true and even condition. Where grades have not been established, the areas shall be smooth-graded and the surface left at the prescribed grades in an even and compacted condition to prevent the formation of low places or pockets where water will stand.

905-3.3 Obtaining topsoil. Prior to the stripping of topsoil from designated areas, any vegetation, briars, stumps and large roots, rubbish or stones found on such areas, which may interfere with subsequent operations, shall be removed using methods approved by the RPR. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means shall be removed.

When suitable topsoil is available on the site, the Contractor shall remove this material from the designated areas and to the depth as directed by the RPR. The topsoil shall be spread on areas already tilled and smooth-graded, or stockpiled in areas approved by the RPR. Any topsoil stockpiled by the Contractor shall be rehandled and placed without additional compensation. Any topsoil that has been stockpiled on the site by others, and is required for topsoil purposes, shall be removed and placed by the Contractor. The sites of all stockpiles and areas adjacent thereto which have been disturbed by the Contractor shall be graded if required and put into a condition acceptable for seeding.

When suitable topsoil is secured off the airport site, the Contractor shall locate and obtain the supply, subject to the approval of the RPR. The Contractor shall notify the RPR sufficiently in advance of operations in order that necessary measurements and tests can be made. The Contractor shall remove the topsoil from approved areas and to the depth as directed. The topsoil shall be hauled to the site of the work and placed for spreading, or spread as required. Any topsoil hauled to the site of the work and stockpiled shall be rehandled and placed without additional compensation.

905-3.4 Placing topsoil. The topsoil shall be evenly spread on the prepared areas to a uniform depth of 2 inches (50 mm) after compaction, unless otherwise shown on the plans or stated in the special provisions. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Spreading shall be carried on so that turfing operations can proceed with a minimum of soil preparation or tilling.

After spreading, any large, stiff clods and hard lumps shall be broken with a pulverizer or by other effective means, and all stones or rocks (2 inches (50 mm) or more in diameter), roots, litter, or any foreign matter shall be raked up and disposed of by the Contractor. After spreading is completed, the topsoil shall be satisfactorily compacted by rolling with a cultipacker or by other means approved by the RPR. The compacted topsoil surface shall conform to the required lines, grades, and cross-sections. Any topsoil or other dirt falling upon pavements as a result of hauling or handling of topsoil shall be promptly removed.

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METHOD OF MEASUREMENT

~~905-4.1 Topsoil obtained on the site shall be measured by the number of cubic yards (cubic meters) of topsoil measured in its original position and stripped or excavated. Topsoil stockpiled by others and removed for topsoil by the Contractor shall be measured by the number of cubic yards (cubic meters) of topsoil measured in the stockpile. Topsoil shall be measured by volume in cubic yards (cubic meters) computed by the method of end areas.~~

~~905-4.2 Topsoil obtained off the site shall be measured by the number of cubic yards (cubic meters) of topsoil measured in its original position and stripped or excavated. Topsoil shall be measured by volume in cubic yards (meters) computed by the method of end areas.~~

BASIS OF PAYMENT

~~905-5.1 Payment will be made at the contract unit price per cubic yard for topsoil (obtained on the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.~~

~~905-5.2 Payment will be made at the contract unit price per cubic yard for topsoil (obtained off the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.~~

Payment will be made under:

Item T-905-5.1 ——— Topsoil, 2" per cubic yard

Topsoil will be incidental to the installation of sod and hydroseed. No additional payment for the procurement or installation of topsoil will be provided.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C117 Materials Finer than 75 μ m (No. 200) Sieve in Mineral Aggregates
by Washing

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-905

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**ITEM S-906
HYDROSEEDING**

DESCRIPTION

906-1.1 This item shall consist of soil preparation, and hydroseeding (or hydraulic mulch seeding, or hydro-mulching) within the Limits of Work, beyond sodded taxiway shoulders, or as directed by the Resident Project Representative (RPR) in accordance with these specifications.

MATERIALS

906-2.1 SEED. The species and application rates of grass seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Fed. Spec. A-A-2671.

Seed shall be furnished separately or in mixtures in standard containers with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the Engineer duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within 6 months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed.

The Contractor shall be responsible for whatever inspection of seed material which may be required by local, state, or federal law and any necessary Certificate of Inspection shall accompany each shipment.

Provide product information and hydroseeding mix design for RPR approval.

All products must be approved by the RPR and the site's governing municipality, if fertilizer applications/rates are regulated by the sites' governing municipality.

Seeds shall be applied as follows:

| Seed | Minimum Seed Purity (percent) | Minimum Germination (percent) | Rate of Application (lb/acre) |
|-----------------|----------------------------------|----------------------------------|----------------------------------|
| Pensacola Bahia | 95 | 80 | 80 |
| Bermuda | 95 | 85 | 20 |

906-2.2 HYDROSEEDING. Equipment shall have a built-in agitation system and operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry containing organic mulching amendment plus fertilizer, chemical additives and solids.

1. GeoPerm Bonded Fiber Matrix (100% virgin wood fibers) 4,000 lbs/AC
2. Aqua-pHix™ Hydro Formula– (for soils in excess of 8.5pH) 10 gal/AC

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3. JumpStart™ - soluble growth stimulant. 1.25 gal/AC
4. BioPrime™ - nitrogen rich biostimulant. 40 lbs/AC
5. Pensacola Bahia seed – AOSCA certified, blue tag 80 lbs/AC
6. Bermuda seed – AOSCA certified, blue tag 20 lbs/AC

a. Water

1. Apply hydroseeding when no rainfall is expected for 12 hours after application.
2. Use clean, water free from substances which might inhibit plant growth. Water is to be provided or arranged for by the Contractor.

b. Soils Test. The Contractor shall test soils for determining pH factor of soil. Submit results to Owner along with written plan to amend soil to pH suitable for selected seed mix design and designated amendments.

1. Where test indicates adjustment of pH factor is required, adjust hydroseed amendments, as necessary, to adjust to proper pH factor. Submit final hydroseed mix design for approval prior to application.
2. Keep record of:
 - i) Locations where tests are made.
 - ii) Readings before corrections are made.

906-2.3 FERTILIZER. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They shall be applied at the rate and to the depth specified herein, and shall meet the requirements of Fed. Spec. A-A-1909 and applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

- a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader; or
- b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or
- c. A granular or pellet form suitable for application by blower equipment.

The following fertilizer applications shall be made:

- a. One Initial Fertilizer application shall be 16-0-8 formulation (or formulation recommended by contractor based on soil test) and shall be spread at the rate of 265 lbs per acre.
- b. One subsequent application of 135 lbs per acre, applied per 906-3.3

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The Contractor must submit the manufacturer or vendor certified analysis for soil amendments and fertilizer materials.

906-2.4 SOIL FOR REPAIRS. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be free from stones larger than 2", roots, stumps, weeds, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the Engineer before being placed. Soil for repairs shall be placed prior to advance preparation operations commence so that it can be incorporated and an acceptable, even surface prepared.

906-2.5 HYDROSEED MIX DESIGN. The hydroseeding mix shall consist of a slurry combination of seed, mulch, fertilizer, tackifier, green dye, and other additives that will remain under rainy conditions and reduce erosion problems and seal the soil moisture. The mix design and application rates shall be as follow:

| | |
|--------------------------------|--------------------------|
| 1. GeoPerm Bonded Fiber Matrix | 4,000 lbs/AC |
| 2. Aqua-pHix™ Hydro Formula | 10 gal/AC (if necessary) |
| 3. JumpStart™ | 1.25 gal/AC |
| 4. BioPrime™ | 40 lbs/AC |
| 5. Pensacola Bahia seed | 80 lbs/AC |
| 6. Bermuda seed | 20 lbs/AC |

Seeding shall be performed during the period between April 1 and November 15 inclusive, unless otherwise approved by the Engineer. If contractor must stabilize soil between November 16 and March 31, the contractor must provide an alternate hydroseed mix design for approval.

CONSTRUCTION METHODS

906-3.1 ADVANCE PREPARATION AND CLEANUP. After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage. This may include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches as a result of grading operations and, if immediately prior to seeding, the top 3 inches of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

However, when the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches. Clods shall

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be broken and the top 3 inches of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

a. Delivery, Storage, and Handling

1. All seed shall be handled and packed in accordance with good industry practices. Seed shall be adequately protected during transit to prevent damages. Upon delivery, Seed will be adequately protected from the sun, moisture, and/or other potential damages.

2. Packaged materials shall be delivered in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at the site.

3. Dirt on Pavements: Where the Contractor's equipment is operated on any portion of the pavement used by traffic, the Contractor shall clean the pavement of all dirt and debris at the end of each day's operation.

4. Dust Control: Dust control operations shall be performed by the Contractor to keep the amount of dust and dirt to a minimum. Water used for dust control shall be furnished and applied by means of tanks equipped with suitable sprinkling devices. All water used shall be paid for by the Contractor. The RPR along with the Contractor's Representative shall determine when water is required to alleviate or prevent dust nuisance.

5. Silting or Washing: No silting or washing of material will be allowed to extend beyond the limits of the property or construction limits line as applicable. Should such silting or washing occur, construct and maintain sediment basin(s) at no expense to the Owner.

Exercise special care to prevent any of the slurry from being sprayed onto any hardscape areas including walks, fences, walls, buildings, etc. Remove all slurry sprayed onto these surfaces at the Contractor's expense. When work is otherwise complete, clean grounds and pavements. Remove excess materials and equipment from project site.

b. Weather Limitations

1. Unfavorable Weather: The Contractor shall commence hydroseeding operations such that a 12-hour window is forecast to have low wind speed, no freezing temperatures, and no rain. Consult with Owner and RPR for approval prior to commencing hydroseeding application.

2. Cold and/or Wet Weather: Planting operations shall stop when soil is frozen or when topsoil is muddy.

906-3.2 APPLYING HYDROSEED

a. Notify Owner and RPR at least forty-eight (48) hours in advance of hydroseeding application.

b. Stake out proposed hydroseeding locations and obtain approval of the RPR before beginning seeding operations.

c. Soil Preparation:

i) Apply specified herbicide at rates specified on product packaging.

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- ii) Surface preparation: Mix soil and additives to 5" depth per advance preparation procedures and rake smooth.
 - iii) Water all hydroseed-designated areas thoroughly to saturate upper layers of soil prior to hydroseeding application.
 - iv) Allow the hydroseed-designated areas' surface to dry prior to the hydroseeding application. Drying period should allow for residual moisture within the first 1/4 inch of the soil surface. There shall be no standing water on the soil's surface at the time of the hydroseeding application.
- c. Apply the hydroseeding in the form of a slurry consisting of soil amendments, fertilizer, and other chemicals specified.
- d. Do not allow hydroseeding slurry components remain in the hydroseeding machine for more than two (2) hours because of possible seed destruction. Add 50% more of the originally-specified seed mix to and slurry mixture not applied within the two (2) hours after mixing. Add 75% more of the original seed mix to any slurry mixture not applied within eight (8) hours after mixing. All mixtures more than eight (8) hours old must be disposed, off-site, at the contractor's expense.
- e. Spray hydroseed-designated areas with a uniform visible coat, using the dark color of the dyed mixture as a guide. Application shall be between 1/4" and 1/8" thick. The slurry shall be applied in a downward, drilling motion via a fan stream nozzle. Insure that all of the slurry components enter and mix uniformly with the soil.

906-3.3 MAINTENANCE OF HYDROSEEDED AREAS. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the Engineer. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the Engineer. A grass stand shall be considered adequate when bare spots are one square foot or less, randomly dispersed, and do not exceed 3% of the area seeded. If at the time when the contract has been otherwise completed it is not possible to make an adequate determination of the color, density, and uniformity of such stand of grass, payment for the unaccepted portions of the areas seeded out of season will be withheld until such time as these requirements have been met.

The Contractor will provide detailed, typewritten instructions and recommendations to be followed by the Owner for properly maintaining hydroseeding work for one full year following installation and maintenance period.

Begin maintenance as soon as each plant is in place and continue maintenance until all planting has passed final acceptance of the total facility by the RPR. Maintenance includes the following: spraying for insect control; watering; weeding; cultivating; removal of dead material; restoration of bare spots larger than one square foot; and other operations to keep seeded areas healthy while providing 100% coverage over bare soil.

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Protect areas outside of designated hydroseeded areas, but within the Owner's property during this work.

a. Acceptance: Upon acceptance of hydroseeding operations, maintain all hydroseeded areas for a period of 90 calendar days as follows:

1. Germination Stage Irrigation: Approximately 25 hours after hydroseeding, initiate the watering sequence. Irrigate for a period of time that sufficiently moistens the soil to the depth of the slurry mulch, taking care not to wash away the slurry and seed. Perform frequent, light irrigation sessions until the seed has germinated. Repair all seed washings and erosion caused by irrigation.

2. Establishment Stage Irrigation: After germination is visible over the entire hydroseeded area, begin to reduce the number of light irrigation sessions. The specific watering program must be approved by the Owner and RPR.

b. Fertilization: As allowed by the Owner, fertilize hydroseeded areas per 906-2.3, initially and 45 calendar days from the start of the maintenance period. Application rate for fertilizer shall be per 906-2.3 or per manufacturer's specification, and in accordance with applicable regulations.

c. Weeding: All concentrated developments of weed growth appearing in the hydroseeded planting areas during the maintenance period shall be removed at two (2) week intervals. The Contractor may elect to remove such concentrations of weeds manually or by an Owner-approved herbicide program.

d. Minimum Coverage and Acceptance:

1. Minimum Coverage: Final acceptance may be given at the end of the 90 calendar day maintenance period if an acceptable germination of turf and adequate plant establishment has been achieved, as determined by the RPR.

2. Acceptance: Final approval and acceptance will be given in writing by the RPR following a final acceptance inspection. The Owner reserves the option to extend the maintenance period to achieve complete germination of all hydroseed areas with a uniform height, color, and density throughout.

906-3.4 CONTRACTOR QUALIFICATIONS. Contractors or subcontractors performing work under this Section shall be qualified to do such work and hold the appropriate registration, license, or other permit as required by state or local law.

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906-4.1 The quantity of hydroseeding to be paid for shall be the number of units in square yards measured on the ground surface, completed and accepted.

BASIS OF PAYMENT

906-5.1 Payment shall be made at the contract unit price per square yards or fraction thereof, which price and payment shall be full compensation for furnishing and placing all material and for all labor, equipment, top soil, tools, and incidentals necessary to complete the work prescribed in this item.

Payment will be made under:

Item S-906-5.1 Hydroseeding — per square yard

MATERIAL REQUIREMENTS

| | |
|-------------------|--------------------|
| FED SPEC A-A-1909 | Fertilizer |
| FED SPEC A-A-2671 | Seeds, Agriculture |

END OF ITEM S-906

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AC 150/5370-10H****ITEM L-108 UNDERGROUND POWER CABLES FOR AIRPORTS****DESCRIPTION**

108-1.1 This item shall consist of furnishing and installing power cables that are direct buried and furnishing and/or installing power cables within conduit or duct banks per these specifications at the locations shown on the plans. It includes excavation and backfill of trench for direct-buried cables only. Also included are the installation of counterpoise wires, ground wires, ground rods and connections, cable splicing, cable marking, cable testing, and all incidentals necessary to place the cable in operating condition as a completed unit to the satisfaction of the RPR. This item shall not include the installation of duct banks or conduit, trenching and backfilling for duct banks or conduit, or furnishing or installation of cable for FAA owned/operated facilities.

EQUIPMENT AND MATERIALS**108-2.1 General.**

a. Airport lighting equipment and materials covered by advisory circulars (AC) shall be approved under the Airport Lighting Equipment Certification Program per AC 150/5345-53, current version.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification, when requested by the RPR.

c. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

d. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format. The RPR reserves the right to reject any and all equipment, materials,

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or procedures that do not meet the system design and the standards and codes, specified in this document.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner. The Contractor shall maintain a minimum insulation resistance in accordance with paragraph 108-3.10e with isolation transformers connected in new circuits and new segments of existing circuits through the end of the contract warranty period when tested in accordance with AC 150/5340-26, *Maintenance Airport Visual Aid Facilities*, paragraph 5.1.3.1, Insulation Resistance Test.

108-2.2 Cable. Underground cable for airfield lighting facilities (runway and taxiway lights and signs) shall conform to the requirements of AC 150/5345-7, Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits latest edition. Conductors for use on 6.6 ampere primary airfield lighting series circuits shall be single conductor, seven strand, #8 American wire gauge (AWG), L-824 Type C, 5,000 volts, non-shielded, with cross-linked polyethylene insulation.

Conductors for use on 20 ampere primary airfield lighting series circuits shall be single conductor, seven strand, #6 AWG, L-824, Type C 5,000 volts, non-shielded, with cross-linked polyethylene insulation. L-824 conductors for use on the L-830 secondary of airfield lighting series circuits shall be sized in accordance with the manufacturer's recommendations. All other conductors shall comply with FAA and National Electric Code (NEC) requirements. Conductor sizes noted above shall not apply to leads furnished by manufacturers on airfield lighting transformers and fixtures.

Wire for electrical circuits up to 600 volts shall comply with Specification L-824 and/or Commercial Item Description A-A-59544A and shall be type THWN-2, 75°C for installation in conduit and RHW-2, 75°C for direct burial installations. Conductors for parallel (voltage) circuits shall be type and size and installed in accordance with NFPA-70, National Electrical Code.

Unless noted otherwise, all 600-volt and less non-airfield lighting conductor sizes are based on a 75°C, THWN-2, 600-volt insulation, copper conductors, not more than three single insulated conductors, in raceway, in free air. The conduit/duct sizes are based on the use of THWN-2, 600-volt insulated conductors. The Contractor shall make the necessary increase in conduit/duct sizes for other types of wire insulation. In no case shall the conduit/duct size be reduced. The minimum power circuit wire size shall be #12 AWG.

Conductor sizes may have been adjusted due to voltage drop or other engineering considerations. Equipment provided by the Contractor shall be capable of accepting the quantity and sizes of conductors shown in the Contract Documents. All conductors, pigtails, cable step-down adapters, cable step-up adapters, terminal blocks and splicing materials necessary to complete the cable termination/splice shall be considered incidental to the respective pay items provided.

Cable type, size, number of conductors, strand and service voltage shall be as specified in the Contract Document.

108-2.3 Bare copper wire (counterpoise, bare copper wire ground and ground rods). Wire for counterpoise or ground installations for airfield lighting systems shall be No. 6 AWG bare solid copper wire for counterpoise and/or No. 6 AWG insulated stranded for grounding bond wire per ASTM B3 and ASTM B8, and shall be bare tinned copper wire per ASTM B33. For voltage powered circuits, the equipment grounding conductor shall comply with NEC Article 250.

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Ground rods shall be sectional copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case be less than 10 feet long and 3/4 inch in diameter.

108-2.4 Cable connections. In-line connections or splices of underground primary cables shall be of the type called for on the plans, and shall be one of the types listed below. No separate payment will be made for cable connections.

a. The cast splice. A cast splice, employing a plastic mold and using epoxy resin equivalent to that manufactured by 3M™ Company, "Scotchcast" Kit No. 82-B, or an approved equivalent, used for potting the splice is acceptable.

b. The field-attached plug-in splice. Field attached plug-in splices shall be installed as shown on the plans. The Contractor shall determine the outside diameter of the cable to be spliced and furnish appropriately sized connector kits and/or adapters. Tape or heat shrink tubing with integral sealant shall be in accordance with the manufacturer's requirements. Primary Connector Kits manufactured by Amerace, "Super Kit", Integro "Complete Kit", or approved equal is acceptable.

c. The factory-molded plug-in splice. Specification for L-823 Connectors, Factory-Molded to Individual Conductors, is acceptable.

d. The taped or heat-shrink splice. Taped splices employing field-applied rubber, or synthetic rubber tape covered with plastic tape is acceptable. The rubber tape should meet the requirements of ASTM D4388 and the plastic tape should comply with Military Specification MIL-I-24391 or Commercial Item Description A-A-55809. Heat shrinkable tubing shall be heavy-wall, self-sealing tubing rated for the voltage of the wire being spliced and suitable for direct-buried installations. The tubing shall be factory coated with a thermoplastic adhesive-sealant that will adhere to the insulation of the wire being spliced forming a moisture- and dirt-proof seal. Additionally, heat shrinkable tubing for multi-conductor cables, shielded cables, and armored cables shall be factory kits that are designed for the application. Heat shrinkable tubing and tubing kits shall be manufactured by Tyco Electronics/ Raychem Corporation, Energy Division, or approved equivalent.

In all the above cases, connections of cable conductors shall be made using crimp connectors using a crimping tool designed to make a complete crimp before the tool can be removed. All L-823/L-824 splices and terminations shall be made per the manufacturer's recommendations and listings.

All connections of counterpoise, grounding conductors and ground rods shall be made by the exothermic process or approved equivalent, except that a light base ground clamp connector shall be used for attachment to the light base. All exothermic connections shall be made per the manufacturer's recommendations and listings.

108-2.5 Splicer qualifications. Every airfield lighting cable splicer shall be qualified in making airport cable splices and terminations on cables rated at or above 5,000 volts AC. The Contractor shall submit to the RPR proof of the qualifications of each proposed cable splicer for the airport cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

108-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

108-2.7 Flowable backfill. Flowable material used to backfill trenches for power cable trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

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108-2.8 Cable identification tags. Cable identification tags shall be made from a non-corrosive material with the circuit identification stamped or etched onto the tag. The tags shall be of the type as detailed on the plans.

108-2.9 Tape. Electrical tapes shall be Scotch™ Electrical Tapes –Scotch™ 88 (1-1/2 inch (38 mm) wide) and Scotch™ 130C® linerless rubber splicing tape (2-inch (50 mm) wide), as manufactured by the Minnesota Mining and Manufacturing Company (3M™), or an approved equivalent.

108-2.10 Electrical coating. Electrical coating shall be Scotchkote™ as manufactured by 3M™, or an approved equivalent.

108-2.11 Existing circuits. Whenever the scope of work requires connection to an existing circuit, the existing circuit's insulation resistance shall be tested, in the presence of the RPR. The test shall be performed per this item and prior to any activity that will affect the respective circuit. The Contractor shall record the results on forms acceptable to the RPR. When the work affecting the circuit is complete, the circuit's insulation resistance shall be checked again, in the presence of the RPR. The Contractor shall record the results on forms acceptable to the RPR. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the existing circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

108-2.12 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) Red (electrical power lines, cables, conduit and lighting cable) with continuous legend tape shall be polyethylene film with a metalized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item. Detectable warning tape for communication cables shall be orange. Detectable warning tape color code shall comply with the APWA Uniform Color Code.

CONSTRUCTION METHODS

108-3.1 General. The Contractor shall install the specified cable at the approximate locations indicated on the plans. Unless otherwise shown on the plans, all cable required to cross under pavements expected to carry aircraft loads shall be installed in concrete encased duct banks. Cable shall be run without splices, from fixture to fixture.

Cable connections between lights will be permitted only at the light locations for connecting the underground cable to the primary leads of the individual isolation transformers. The Contractor shall be responsible for providing cable in continuous lengths for home runs or other long cable runs without connections unless otherwise authorized in writing by the RPR or shown on the plans.

In addition to connectors being installed at individual isolation transformers, L-823 cable connectors for maintenance and test points shall be installed at locations shown on the plans. Cable circuit identification markers shall be installed on both sides of the L-823 connectors installed and on both sides of slack loops where a future connector would be installed.

Provide not less than 3 feet (1 m) of cable slack on each side of all connections, isolation transformers, light units, and at points where cable is connected to field equipment. Where provisions must be made for testing or for future above grade connections, provide enough slack to allow the cable to be extended at least one foot (30 cm) vertically above the top of the access structure. This requirement also applies where primary cable passes through empty light

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bases, junction boxes, and access structures to allow for future connections, or as designated by the RPR.

Primary airfield lighting cables installed shall have cable circuit identification markers attached on both sides of each L-823 connector and on each airport lighting cable entering or leaving cable access points, such as manholes, hand holes, pull boxes, junction boxes, etc. Markers shall be of sufficient length for imprinting the cable circuit identification legend on one line, using letters not less than 1/4 inch (6 mm) in size. The cable circuit identification shall match the circuits noted on the construction plans.

108-3.2 Installation in duct banks or conduits. This item includes the installation of the cable in duct banks or conduit per the following paragraphs. The maximum number and voltage ratings of cables installed in each single duct or conduit, and the current-carrying capacity of each cable shall be per the latest version of the National Electric Code, or the code of the local agency or authority having jurisdiction.

The Contractor shall make no connections or splices of any kind in cables installed in conduits or duct banks.

Unless otherwise designated in the plans, where ducts are in tiers, use the lowest ducts to receive the cable first, with spare ducts left in the upper levels. Check duct routes prior to construction to obtain assurance that the shortest routes are selected and that any potential interference is avoided.

Duct banks or conduits shall be installed as a separate item per Item L-110, Airport Underground Electrical Duct Banks and Conduit. The Contractor shall run a mandrel through duct banks or conduit prior to installation of cable to ensure that the duct bank or conduit is open, continuous and clear of debris. The mandrel size shall be compatible with the conduit size. The Contractor shall swab out all conduits/ducts and clean light bases, manholes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed, the light bases and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, light bases, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be re-cleaned at the Contractor's expense. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

The cable shall be installed in a manner that prevents harmful stretching of the conductor, damage to the insulation, or damage to the outer protective covering. The ends of all cables shall be sealed with moisture-seal tape providing moisture-tight mechanical protection with minimum bulk, or alternately, heat shrinkable tubing before pulling into the conduit and it shall be left sealed until connections are made. Where more than one cable is to be installed in a conduit, all cable shall be pulled in the conduit at the same time. The pulling of a cable through duct banks or conduits may be accomplished by hand winch or power winch with the use of cable grips or pulling eyes. Maximum pulling tensions shall not exceed the cable manufacturer's recommendations. A non-hardening cable-pulling lubricant recommended for the type of cable being installed shall be used where required.

The Contractor shall submit the recommended pulling tension values to the RPR prior to any cable installation. If required by the RPR, pulling tension values for cable pulls shall be monitored by a dynamometer in the presence of the RPR. Cable pull tensions shall be recorded by the Contractor and reviewed by the RPR. Cables exceeding the maximum allowable pulling tension values shall be removed and replaced by the Contractor at the Contractor's expense.

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The manufacturer's minimum bend radius or NEC requirements (whichever is more restrictive) shall apply. Cable installation, handling and storage shall be per manufacturer's recommendations. During cold weather, particular attention shall be paid to the manufacturer's minimum installation temperature. Cable shall not be installed when the temperature is at or below the manufacturer's minimum installation temperature. At the Contractor's option, the Contractor may submit a plan, for review by the RPR, for heated storage of the cable and maintenance of an acceptable cable temperature during installation when temperatures are below the manufacturer's minimum cable installation temperature.

Cable shall not be dragged across base can or manhole edges, pavement or earth. When cable must be coiled, lay cable out on a canvas tarp or use other appropriate means to prevent abrasion to the cable jacket.

108-3.3 Installation of direct-buried cable in trenches. Unless otherwise specified, the Contractor shall not use a cable plow for installing the cable. Cable shall be unreeled uniformly in place alongside or in the trench and shall be carefully placed along the bottom of the trench. The cable shall not be unreeled and pulled into the trench from one end. Slack cable sufficient to provide strain relief shall be placed in the trench in a series of S curves. Sharp bends or kinks in the cable shall not be permitted.

Where cables must cross over each other, a minimum of 3 inches (75 mm) vertical displacement shall be provided with the topmost cable depth at or below the minimum required depth below finished grade.

a. Trenching. Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored. Trenches for cables may be excavated manually or with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of surface is disturbed. Graders shall not be used to excavate the trench with their blades. The bottom surface of trenches shall be essentially smooth and free from coarse aggregate. Unless otherwise specified, cable trenches shall be excavated to a minimum depth of 18 inches (0.5 m) below finished grade per NEC Table 300.5, except as follows:

- When off the airport or crossing under a roadway or driveway, the minimum depth shall be 36 inches (91 cm) unless otherwise specified.
- Minimum cable depth when crossing under a railroad track, shall be 42 inches (1 m) unless otherwise specified.

The Contractor shall excavate all cable trenches to a width not less than 6 inches (150 mm). Unless otherwise specified on the plans, all cables in the same location and running in the same general direction shall be installed in the same trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches (75 mm) below the required cable depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. Flowable backfill material may alternatively be used.

Duct bank or conduit markers temporarily removed for trench excavations shall be replaced as required.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

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(1) Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred.

(2) Trenching, etc., in cable areas shall then proceed, with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair or replacement.

b. Backfilling. After the cable has been installed, the trench shall be backfilled. The first layer of backfill in the trench shall encompass all cables ; be 3 inches (75 mm) deep, loose measurement; and shall be either earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. This layer shall not be compacted. The second layer shall be 5 inches (125 mm) deep, loose measurement, and shall contain no particles that would be retained on a one inch (25.0 mm) sieve. The remaining third and subsequent layers of backfill shall not exceed 8 inches (20 cm) of loose measurement and be excavated or imported material and shall not contain stone or aggregate larger than 4 inches (100 mm) maximum diameter.

The second and subsequent layers shall be thoroughly tamped and compacted to at least the density of the adjacent material. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be backfilled with controlled low strength material (CLSM) in accordance with P-153.

Trenches shall not contain pools of water during backfilling operations. The trench shall be completely backfilled and tamped level with the adjacent surface, except that when turf is to be established over the trench, the backfilling shall be stopped at an appropriate depth consistent with the type of turving operation to be accommodated. A proper allowance for settlement shall also be provided. Any excess excavated material shall be removed and disposed of per the plans and specifications.

Underground electrical warning (caution) tape shall be installed in the trench above all direct-buried cable. Contractor shall submit a sample of the proposed warning tape for acceptance by the RPR. If not shown on the plans, the warning tape shall be located 6 inches (150 mm) above the direct-buried cable or the counterpoise wire if present. A 6 inch (75 - 150 mm) wide polyethylene film detectable tape, with a metalized foil core, shall be installed above all direct buried cable or counterpoise. The tape shall be of the color and have a continuous legend as indicated on the plans. The tape shall be installed 8 inches (200 mm) minimum below finished grade.

c. Restoration. Following restoration of all trenching near airport movement surfaces, the Contractor shall visually inspect the area for foreign object debris (FOD) and remove any that is found. Where soil and sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by work shall be restored to its original condition. The restoration shall include the sodding as shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. When trenching is through paved areas, restoration shall be equal to existing conditions. If the cable is to be installed in locations or areas where other compaction requirements are specified (under pavements, embankments, etc.) the backfill compaction shall be backfilled with controlled low strength material (CLSM) in accordance with P-153. Restoration shall be considered incidental to the pay item of which it is a component part.

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108-3.4 Cable markers for direct-buried cable. The location of direct buried circuits shall be marked by a concrete slab marker, 2 feet (60 cm) square and 4-6 inch (10 - 15 cm) thick, extending approximately one inch (25 mm) above the surface. Each cable run from a line of lights and signs to the equipment vault shall be marked at approximately every 200 feet (61 m) along the cable run, with an additional marker at each change of direction of cable run. All other direct-buried cable shall be marked in the same manner. Cable markers shall be installed directly above the cable. The Contractor shall impress the word "CABLE" and directional arrows on each cable marking slab. The letters shall be approximately 4 inches (100 mm) high and 3 inches (75 mm) wide, with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep. Stencils shall be used for cable marker lettering; no hand lettering shall be permitted.

At the location of each underground cable connection/splice, except at lighting units, or isolation transformers, a concrete marker slab shall be installed to mark the location of the connection/splice. The Contractor shall impress the word "SPLICE" on each slab. The Contractor also shall impress additional circuit identification symbols on each slab as directed by the RPR. All cable markers and splice markers shall be painted international orange. Paint shall be specifically manufactured for uncured exterior concrete. After placement, all cable or splice markers shall be given one coat of high-visibility aviation orange paint as approved by the RPR. Furnishing and installation of cable markers is incidental to the respective cable pay item.

108-3.5 Splicing. Connections of the type shown on the plans shall be made by experienced personnel regularly engaged in this type of work and shall be made as follows:

a. Cast splices. These shall be made by using crimp connectors for jointing conductors. Molds shall be assembled, and the compound shall be mixed and poured per the manufacturer's instructions and to the satisfaction of the RPR.

b. Field-attached plug-in splices. These shall be assembled per the manufacturer's instructions. These splices shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches (38 mm) on each side of the joint (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches (38 mm) on each side of the joint or (3) On connector kits equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

c. Factory-molded plug-in splices. These shall be made by plugging directly into mating connectors. The joint where the connectors come together shall be finished by one of the following methods: (1) Wrapped with at least one layer of rubber or synthetic rubber tape and one layer of plastic tape, one-half lapped, extending at least 1-1/2 inches (38 mm) on each side of the joint. (2) Covered with heat shrinkable tubing with integral sealant extending at least 1-1/2 inches (38 mm) on each side of the joint. or (3) On connector kits so equipped with water seal flap; roll-over water seal flap to sealing position on mating connector.

d. Taped or heat-shrink splices. A taped splice shall be made in the following manner:

Bring the cables to their final position and cut so that the conductors will butt. Remove insulation and jacket allowing for bare conductor of proper length to fit compression sleeve connector with 1/4 inch (6 mm) of bare conductor on each side of the connector. Prior to splicing, the two ends of the cable insulation shall be penciled using a tool designed specifically for this purpose and for cable size and type. Do not use emery paper on splicing operation since it contains metallic particles. The copper conductors shall be thoroughly cleaned. Join the conductors by inserting them equidistant into the compression connection sleeve. Crimp conductors firmly in place with crimping tool that requires a complete crimp before tool can be removed. Test the crimped

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connection by pulling on the cable. Scrape the insulation to assure that the entire surface over which the tape will be applied (plus 3 inches (75 mm) on each end) is clean. After scraping, wipe the entire area with a clean lint-free cloth. Do not use solvents.

Apply high-voltage rubber tape one-half lapped over bare conductor. This tape should be tensioned as recommended by the manufacturer. Voids in the connector area may be eliminated by highly elongating the tape, stretching it just short of its breaking point. The manufacturer's recommendation for stretching tape during splicing shall be followed. Always attempt to exactly half-lap to produce a uniform buildup. Continue buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered a distance of approximately one inch (25 mm) over the original jacket. Cover rubber tape with two layers of vinyl pressure-sensitive tape one-half lapped. Do not use glyptol or lacquer over vinyl tape as they react as solvents to the tape. No further cable covering or splice boxes are required.

Heat shrinkable tubing shall be installed following manufacturer's instructions. Direct flame heating shall not be permitted unless recommended by the manufacturer. Cable surfaces within the limits of the heat-shrink application shall be clean and free of contaminants prior to application.

e. Assembly. Surfaces of equipment or conductors being terminated or connected shall be prepared in accordance with industry standard practice and manufacturer's recommendations. All surfaces to be connected shall be thoroughly cleaned to remove all dirt, grease, oxides, nonconductive films, or other foreign material. Paints and other nonconductive coatings shall be removed to expose base metal. Clean all surfaces at least 1/4 inch (6.4 mm) beyond all sides of the larger bonded area on all mating surfaces. Use a joint compound suitable for the materials used in the connection. Repair painted/coated surface to original condition after completing the connection.

108-3.6 Bare counterpoise wire installation for lightning protection and grounding. If shown on the plans or included in the job specifications, bare solid #6 AWG copper counterpoise wire shall be installed for lightning protection of the underground cables. The RPR shall select one of two methods of lightning protection for the airfield lighting circuit based upon sound engineering practice and lightning strike density.

a. Equipotential. The counterpoise size is as shown on the plans. The equipotential method is applicable to all airfield lighting systems; i.e. runway, taxiway, apron – touchdown zone, centerline, edge, threshold and approach lighting systems. The equipotential method is also successfully applied to provide lightning protection for power, signal and communication systems. The light bases, counterpoise, etc – all components - are bonded together and bonded to the vault power system ground loop/electrode.

Counterpoise wire shall be installed in the same trench for the entire length of buried cable, conduits and duct banks that are installed to contain airfield cables. The counterpoise is centered over the cable/conduit/duct to be protected.

The counterpoise conductor shall be installed no less than 8 inches (200 mm) minimum or 12 inches (300 mm) maximum above the raceway or cable to be protected, except as permitted below:

(1) The minimum counterpoise conductor height above the raceway or cable to be protected shall be permitted to be adjusted subject to coordination with the airfield lighting and pavement designs.

(2) The counterpoise conductor height above the protected raceway(s) or cable(s) shall be calculated to ensure that the raceway or cable is within a 45-degree area of protection, (45 degrees on each side of vertical creating a 90 degree angle).

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The counterpoise conductor shall be bonded to each metallic light base, mounting stake, and metallic airfield lighting component.

All metallic airfield lighting components in the field circuit on the output side of the constant current regulator (CCR) or other power source shall be bonded to the airfield lighting counterpoise system.

All components rise and fall at the same potential; with no potential difference, no damaging arcing and no damaging current flow.

See AC 150/5340-30, Design and Installation Details for Airport Visual Aids and NFPA 780, Standard for the Installation of Lightning Protection Systems, Chapter 11, for a detailed description of the Equipotential Method of lightning protection.

Reference FAA STD-019E, Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment, Part 4.1.1.7.

b. Isolation – Not Used

c. Common Installation requirements. When a metallic light base is used, the grounding electrode shall be bonded to the metallic light base or mounting stake with a No. 6 AWG bare, annealed or soft drawn, solid copper conductor.

Grounding electrodes may be rods, ground dissipation plates, radials, or other electrodes listed in the NFPA 70 (NEC) or NFPA 780.

Where raceway is installed by the directional bore, jack and bore, or other drilling method, the counterpoise conductor shall be permitted to be installed concurrently with the directional bore, jack and bore, or other drilling method raceway, external to the raceway or sleeve.

The counterpoise wire shall also be exothermically welded to ground rods installed as shown on the plans but not more than 500 feet (150 m) apart around the entire circuit. The counterpoise system shall be continuous and terminate at the transformer vault or at the power source. It shall be securely attached to the vault or equipment external ground ring or other made electrode-grounding system. The connections shall be made as shown on the plans and in the specifications.

Where an existing airfield lighting system is being extended or modified, the new counterpoise conductors shall be interconnected to existing counterpoise conductors at each intersection of the new and existing airfield lighting counterpoise systems.

d. Parallel Voltage Systems. Provide grounding and bonding in accordance with NFPA 70, National Electrical Code.

108-3.7 Counterpoise installation above multiple conduits and duct banks. Counterpoise wires shall be installed above multiple conduits/duct banks for airfield lighting cables, with the intent being to provide a complete area of protection over the airfield lighting cables. When multiple conduits and/or duct banks for airfield cable are installed in the same trench, the number and location of counterpoise wires above the conduits shall be adequate to provide a complete area of protection measured 45 degrees each side of vertical.

Where duct banks pass under pavement to be constructed in the project, the counterpoise shall be placed above the duct bank. Reference details on the construction plans.

108-3.8 Counterpoise installation at existing duct banks. When airfield lighting cables are indicated on the plans to be routed through existing duct banks, the new counterpoise wiring shall be terminated at ground rods at each end of the existing duct bank where the cables being

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protected enter and exit the duct bank. The new counterpoise conductor shall be bonded to the existing counterpoise system.

108-3.9 Exothermic bonding. Bonding of counterpoise wire shall be by the exothermic welding process or equivalent method accepted by the RPR. Only personnel experienced in and regularly engaged in this type of work shall make these connections.

Contractor shall demonstrate to the satisfaction of the RPR, the welding kits, materials and procedures to be used for welded connections prior to any installations in the field. The installations shall comply with the manufacturer's recommendations and the following:

- a. All slag shall be removed from welds.
- b. Using an exothermic weld to bond the counterpoise to a lug on a galvanized light base is not recommended unless the base has been specially modified. Consult the manufacturer's installation directions for proper methods of bonding copper wire to the light base. See AC 150/5340-30 for galvanized light base exception.
- c. If called for in the plans, all buried copper and weld material at weld connections shall be thoroughly coated with 6 mm of 3M™ Scotchkote™, or approved equivalent, or coated with coal tar Bitumastic® material to prevent surface exposure to corrosive soil or moisture.

108-3.10 Testing. The Contractor shall furnish all necessary equipment and appliances for testing the airport electrical systems and underground cable circuits before and after installation. The Contractor shall perform all tests in the presence of the RPR. The Contractor shall demonstrate the electrical characteristics to the satisfaction of the RPR. All costs for testing are incidental to the respective item being tested. For phased projects, the tests must be completed by phase. The Contractor must maintain the test results throughout the entire project as well as during the warranty period that meet the following:

- a. Earth resistance testing methods shall be submitted to the RPR for approval. Earth resistance testing results shall be recorded on an approved form and testing shall be performed in the presence of the RPR. All such testing shall be at the sole expense of the Contractor.
- b. Should the counterpoise or ground grid conductors be damaged or suspected of being damaged by construction activities the Contractor shall test the conductors for continuity with a low resistance ohmmeter. The conductors shall be isolated such that no parallel path exists and tested for continuity. The RPR shall approve of the test method selected. All such testing shall be at the sole expense of the Contractor.

After installation, the Contractor shall test and demonstrate to the satisfaction of the RPR the following:

- c. That all affected lighting power and control circuits (existing and new) are continuous and free from short circuits.
- d. That all affected circuits (existing and new) are free from unspecified grounds.
- e. That the insulation resistance to ground of all new non-grounded high voltage series circuits or cable segments is not less than 500 megohms. Verify continuity of all series airfield lighting circuits prior to energization.
- f. That the insulation resistance to ground of all new non-grounded conductors of new multiple circuits or circuit segments is not less than 100 megohms.
- g. That all affected circuits (existing and new) are properly connected per applicable wiring diagrams.

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h. That all affected circuits (existing and new) are operable. Tests shall be conducted that include operating each control not less than 10 times and the continuous operation of each lighting and power circuit for not less than 1/2 hour.

i. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be used, as described by American National Standards Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81, to verify this requirement. As an alternate, clamp-on style ground impedance test meters may be used to satisfy the impedance testing requirement. Test equipment and its calibration sheets shall be submitted for review and approval by the RPR prior to performing the testing.

Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the RPR. Where connecting new cable to existing cable, insulation resistance tests shall be performed on the new cable prior to connection to the existing circuit.

There are no approved "repair" procedures for items that have failed testing other than complete replacement.

METHOD OF MEASUREMENT

108-4.1 Trenching shall be measured by the linear feet (meters) of trench, including the excavation, backfill, and restoration, completed, measured as excavated, and accepted as satisfactory. When specified, separate measurement shall be made for trenches of various specified widths.

The cost of all excavation, backfill, dewatering and restoration regardless of the type of material encountered shall be included in the unit price bid for the work.

108-4.2 Cable or counterpoise wire installed in trench, duct bank or conduit shall be measured by the number of linear feet (meters) installed and grounding connectors, and trench marking tape ready for operation, and accepted as satisfactory. Separate measurement shall be made for each cable or counterpoise wire installed in trench, duct bank or conduit. The measurement for this item shall not include additional quantities required for slack. Cable and counterpoise slack is considered incidental to this item and is included in the contractor's unit price. No separate measurement or payment will be made for cable or counterpoise slack.

108-4.3 Ground rods shall be measured by each 10-foot section installed.

BASIS OF PAYMENT

108-5.1 Payment will be made at the contract unit price for trenching, cable and bare counterpoise wire installed in trench (direct-buried), or cable and equipment ground installed in duct bank or conduit, in place by the Contractor and accepted by the RPR. This price shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor, equipment, tools, and incidentals, including ground rods and ground connectors and trench marking tape, necessary to complete this item.

Payment will be made under:

| | |
|----------------|---|
| Item L-108-5.1 | Hand excavate minimum 8" Wide x 28" Deep in earth. Includes all labor, hand excavation, backfill and sod restoration, complete in place. - Price per linear foot. |
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| Item L-108-5.2 | Saw cut and hand excavate minimum 8" Wide x 28" Deep in existing full strength pavement. Includes all labor, hand excavation, saw cutting, backfill, concrete, pavement repair, complete in place. - Price per linear foot. |
| Item L-108-5.3 | 3/4" x 20' ground rods connected to counterpoise. Includes all labor, ground rods, excavation, splice kits, testing, backfill, connections, exothermic welds, and etc., complete in place. - Price per each. |
| Item L-108-5.4 | Additional 10' ground rod sections. Includes all labor, ground rods, excavation, splice kits, testing, backfill, connections, exothermic welds and etc., complete in place - Price per each. |
| Item L-108-5.5 | #6 bare solid AWG counterpoise conductor installed over conduit system. Includes all labor, conductors, splice kits, exothermic welds, testing, excavation, backfill, and etc. complete in place. - Price per linear foot. |
| Item L-108-5.6 | #8, 5KV, L-824 conductor installed in new and existing conduit/ductbank system. Includes all labor, conductors, testing, cleaning and dewatering, removal and disposal of existing conductors, pull string, pulling compound, identification, connector kits, and etc., complete in place. - Price per linear foot. |

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

- | | |
|----------------|--|
| AC 150/5340-26 | Maintenance of Airport Visual Aid Facilities |
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
| AC 150/5345-7 | Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits |
| AC 150/5345-26 | Specification for L-823 Plug and Receptacle, Cable Connectors |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program |

Commercial Item Description

- | | |
|------------|---|
| A-A-59544A | Cable and Wire, Electrical (Power, Fixed Installation) |
| A-A-55809 | Insulation Tape, Electrical, Pressure-Sensitive Adhesive, Plastic |

ASTM International (ASTM)

- | | |
|---------|--|
| ASTM B3 | Standard Specification for Soft or Annealed Copper Wire |
| ASTM B8 | Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft |

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ASTM B33 **Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes**

ASTM D4388 **Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes**

Mil Spec

MIL-PRF-23586F **Performance Specification: Sealing Compound (with Accelerator), Silicone Rubber, Electrical**

MIL-I-24391 **Insulation Tape, Electrical, Plastic, Pressure Sensitive**

National Fire Protection Association (NFPA)

NFPA-70 **National Electrical Code (NEC)**

NFPA-780 **Standard for the Installation of Lightning Protection Systems**

American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE)

ANSI/IEEE STD 81 **IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System**

Federal Aviation Administration Standard

FAA STD-019E **Lightning and Surge Protection, Grounding Bonding and Shielding Requirements for Facilities and Electronic Equipment**

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TESTING REPORT
CIRCUIT MEASURING TEST DATA

Airport _____ Date _____
Location _____ Job# _____
Project ID _____

| | | |
|------------------------|-------------------|----------------------------|
| Item Under Test | Cable Length | Duct _____ Buried _____ |
| Number of Conductor | Conductor Size | Type Class Insulation |
| Voltage Rating | Age | Type of Test Performed |

| Circuit | Test Time | Test V | Leakage / Ohms Res A-GND |
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Remarks _____

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TESTING REPORT

GROUND RESISTANCE MEASURING TEST DATA

Airport _____ Date _____
Type of Testing Equipment _____ Job# _____
Project ID _____

| Location | Length and Diameter of Ground Rod | Ohms Resistance to Ground |
|----------|--------------------------------------|---------------------------|
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Remarks _____

END OF ITEM L-108

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AC 150/5370-10H****ITEM L-110 AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS****DESCRIPTION**

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits. It shall also include all turfing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS**110-2.1 General.**

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12)

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months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

110-2.3 Plastic conduit. Plastic conduit and fittings shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

- a. Type I—Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.
- b. Type II—Schedule 40 PVC suitable for either above ground or underground use.
- c. Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.
- d. Type III –HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 Split conduit. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 Conduit spacers. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

110-2.7 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 Flowable backfill. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

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110-2.9 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), orange (telephone/fiber optic cabling) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item.

CONSTRUCTION METHODS

110-3.1 General. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses, if required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches (50 mm) inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches (75 mm) per 100 feet (30 m). On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches (0.5 m) below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches (0.5 m) below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch (6 mm) smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor's expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200-pound (90 kg) test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet (1.5 m).

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways,

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taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches (75 mm) below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. Flowable backfill may alternatively be used.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer's recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet (60 cm).

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

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b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

110-3.2 Duct banks. Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches (0.5 m) below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches (0.5 m) below finished grade where installed in unpaved areas.

Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet (1 m) beyond the edges of the pavement or 3 feet (1 m) beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches (75 mm) thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches (75 mm) apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches (75 mm) thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot (1.5-m) intervals.

All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches (75 to 150 mm) wide tape, 8 inches (200 mm) minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch (75-mm) wide tape only for single conduit runs. Utilize the 6-inch (150-mm) wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches (600 mm) in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

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110-3.3 Conduits without concrete encasement. Trenches for single-conduit lines shall be not less than 6 inches (150 mm) nor more than 12 inches (300 mm) wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches (100 mm) thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch (6.3 mm) sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches (0.5 m) below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches (60 cm) below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

110-3.4 Markers. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet (60 cm) square and 4 - 6 inches (100 - 150 mm) thick extending approximately one inch (25 mm) above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet (61 m) along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word "DUCT" or "CONDUIT" on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches (100 mm) high and 3 inches (75 mm) wide with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep or as large

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as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 Backfilling for conduits. For conduits, 8 inches (200 mm) of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches (100 mm) in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 Backfilling for duct banks. After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 "Excavation and Embankment" except that the material used for backfill shall be select material not larger than 4 inches (100 mm) in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet (76 m) of duct bank or one work period's construction, whichever is less.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 Restoration. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include sodding shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD) and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 Ownership of removed cable. The Contractor is to take possession of the removed cable and dispose of off-site.

METHOD OF MEASUREMENT

110-4.1 Underground conduits and duct banks shall be measured by the linear feet (meter) of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage

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structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

BASIS OF PAYMENT

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

- | | |
|----------------|--|
| Item L-110-5.1 | One 2" schedule 40 PVC conduit non-encased direct buried in earth, 24-inch minimum cover, complete in place. Includes conduits, connectors, warning tape, excavation, labor, backfill and etc., complete in place. – Price per linear foot |
| Item L-110-5.2 | One 2" schedule 40 PVC conduit concrete encased and installed in new full-strength pavement, 24-inch minimum cover, complete in place. Includes conduits, connectors, saw cutting, excavation, warning tape, concrete, labor, backfill and etc., complete in place. – Price per linear foot |
| Item L-110-5.3 | One 2" schedule 40 PVC conduit concrete encased and installed in existing full-strength pavement, 24-inch minimum cover, complete in place. Includes conduits, connectors, saw cutting, excavation, warning tape, concrete, labor, backfill and etc., complete in place. – Price per linear foot |
| Item L-110-5.4 | Intercept existing conduit system and connect to new conduit system. Includes excavation, chipping back of concrete encasement, sawcutting, backfill, sod/pavement restoration, concrete, labor and etc., complete in place. – Price per each |
| Item L-110-5.5 | Hand excavate and concrete encase existing 1W2" conduit, complete. Includes excavation, concrete, backfill, labor and etc., complete in place. – Price per linear foot |
| Item L-110-5.6 | Hand excavate and concrete encase existing 2W4" conduit, complete. Includes excavation, concrete, backfill, labor and etc., complete in place. – Price per linear foot |

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The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circular (AC)

- | | |
|----------------|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program |

ASTM International (ASTM)

- | | |
|-----------|--|
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
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National Fire Protection Association (NFPA)

- | | |
|---------|--------------------------------|
| NFPA-70 | National Electrical Code (NEC) |
|---------|--------------------------------|

Underwriters Laboratories (UL)

- | | |
|------------------|---|
| UL Standard 6 | Electrical Rigid Metal Conduit - Steel |
| UL Standard 514B | Conduit, Tubing, and Cable Fittings |
| UL Standard 514C | Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers |
| UL Standard 1242 | Electrical Intermediate Metal Conduit Steel |
| UL Standard 651 | Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings |
| UL Standard 651A | Type EB and A Rigid PVC Conduit and HDPE Conduit |

END OF ITEM L-110

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115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS**115-2.1 General.**

- a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the RPR Engineer.
- b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.
- c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.
- d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.
- e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

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115-2.2 Concrete structures. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Cast-in-place concrete structures shall be as shown on the plans.

115-2.3 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.

Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 100,000 lb aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 Junction boxes. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless-steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch (9-mm) thickness for L-867 and 3/4-inch (19-mm) thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 Mortar. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 Concrete. All concrete used in structures shall conform to the requirements of Item P-610, Concrete for Miscellaneous Structures.

115-2.7 Frames and covers. The frames shall conform to one of the following requirements:

- a. ASTM A48 Gray iron castings
- b. ASTM A47 Malleable iron castings
- c. ASTM A27 Steel castings
- d. ASTM A283, Grade D Structural steel for grates and frames
- e. ASTM A536 Ductile iron castings
- f. ASTM A897 Austempered ductile iron castings

All castings specified shall withstand a maximum tire pressure of 250 psi and maximum load of 300,000 pounds.

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All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "ELECTRIC" or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.8 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.

115-2.9 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 Bedding/special backfill. Bedding or special backfill shall be as shown on the plans.

115-2.11 Flowable backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 Cable trays. Cable trays shall be plastic. Cable trays shall be located as shown on the plans.

115-2.13 Plastic conduit. Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

115-2.14 Conduit terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 Pulling-in irons. Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch (12 mm) diameter with an ultimate strength of 270,000 psi (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 Ground rods. Ground rods shall be one piece, copper clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8 feet (2.4 m) long nor less than 5/8 inch (16 mm) in diameter.

CONSTRUCTION METHODS

115-3.1 Unclassified excavation. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of

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sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

115-3.2 Concrete structures. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 Precast unit installations. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 Placement and treatment of castings, frames and fittings. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR

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and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 Installation of ladders. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 Removal of sheeting and bracing. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 Backfilling. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 Connection of duct banks. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 Grounding. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches (150 mm) above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch (100 mm) diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with Portland cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through bottom slab and installing

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the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot (30 cm) above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtailed shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 Cleanup and repair. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective Item L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 Inspection. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 Manhole elevation adjustments. The Contractor shall adjust the tops of existing manholes in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each manhole to the new elevations. The existing top elevation of each manhole to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades.

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The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation.

The Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

115-3.14 Duct extension to existing ducts. Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

METHOD OF MEASUREMENT

115-4.1 Electrical manholes and junction structures shall be measured by each unit completed in place and accepted. The following items shall be included in the price of each unit: All required excavation and dewatering;; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing

115-4.2 Manhole elevation adjustments shall be measured by the completed unit installed, in place, completed, and accepted. Separate measurement shall not be made for the various types and sizes.

BASIS OF PAYMENT

115-5.1 The accepted quantity of electrical manholes and junction structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

115-5.2 Payment shall be made at the contract unit price for manhole elevation adjustments. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary, including but not limited to, spacers, concrete, rebar, dewatering, excavating, backfill, topsoil, sodding and pavement restoration, where required, to complete this item as shown in the plans and to the satisfaction of the RPR.

Payment will be made under:

| | |
|----------------|---|
| Item L-115-5.1 | L-867 16" diameter junction can with cover installed in earth. Includes excavation, 16" diameter L-867 base can, concrete, steel cover, carbon steel coated bolts, identification, connector kits, grounding, ground rods, safety grounds, identification, testing, labor, rock, backfill and etc., complete in place. – Price per each |
| Item L-115-5.2 | L-867 16" diameter bottomless 2 can junction can plaza installed in earth. Includes excavation, 2-16" diameter L-867 base cans, concrete, WWF/rebar, steel covers, carbon steel coated bolts, |

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identification, connector kits, grounding, ground rods, safety grounds, identification, testing, labor, rock, backfill and etc. complete in place. – Price per each

- Item L-115-5.3 Intercept existing light base can in earth/existing pavement and connect to conduit system. Includes sawcutting, excavation, core drilling, can repair, backfill, concrete, sod/pavement restoration, dewatering, labor and etc., complete in place. – Price per each
- Item L-115-5.4 Removal of existing junction can/light base can in earth, complete. Includes backfill, labor, disposal, removal of base can, protection of fixture, connector kits, disconnection of existing circuit, removal of circuit conductors, reconnection of existing circuit, reconnection of existing conduits, conduits, temporary conduits and conductors, sod restoration and etc. complete in place. – Price per each
- Item L-115-5.5 Removal of existing junction can/light base can in existing pavement, complete. Includes backfill, labor, concrete, saw cutting, disposal, removal of base can, protection of fixture, connector kits, disconnection of existing circuit, removal of circuit conductors, reconnection of existing circuit, reconnection of existing conduits, conduits, temporary conduits and conductors, pavement restoration and etc. complete in place. – Price per each
- Item L-115-5.6 Removal of existing 2 can junction can plaza in earth, complete. Includes backfill, labor, saw cutting, disposal, removal disconnection of existing circuit, removal of circuit conductors, reconnection of existing circuit, reconnection of existing conduits, conduits, temporary conduits and conductors, sod restoration and etc. complete in place. – Price per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/IEEE STD 81 IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System

Advisory Circular (AC)

AC 150/5345-7 Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits

AC 150/5345-26 Specification for L-823 Plug and Receptacle, Cable Connectors

AC 150/5345-42 Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories

AC 150/5340-30 Design and Installation Details for Airport Visual Aids

AC 150/5345-53 Airport Lighting Equipment Certification Program

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AC 150/5370-10H****Commercial Item Description (CID)****A-A 59544 Cable and Wire, Electrical (Power, Fixed Installation)****ASTM International (ASTM)**

| | |
|------------------|---|
| ASTM A27 | Standard Specification for Steel Castings, Carbon, for General Application |
| ASTM A47 | Standard Specification for Ferritic Malleable Iron Castings |
| ASTM A48 | Standard Specification for Gray Iron Castings |
| ASTM A123 | Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products |
| ASTM A283 | Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates |
| ASTM A536 | Standard Specification for Ductile Iron Castings |
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
| ASTM A897 | Standard Specification for Austempered Ductile Iron Castings |
| ASTM C144 | Standard Specification for Aggregate for Masonry Mortar |
| ASTM C150 | Standard Specification for Portland Cement |
| ASTM C206 | Standard Specification for Finishing Hydrated Lime |

FAA Engineering Brief (EB)**EB #83 In Pavement Light Fixture Bolts****Mil Spec****MIL-P-21035 Paint High Zinc Dust Content, Galvanizing Repair****National Fire Protection Association (NFPA)****NFPA-70 National Electrical Code (NEC)****END OF ITEM L-115**

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AC 150/5370-10H****ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS****DESCRIPTION**

125-1.1 This item shall consist of airport lighting systems furnished, and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS**125-2.1 General.**

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not perform as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

b. Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be submitted in electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR's opinion, does not meet the system design and the standards and codes, specified herein.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner. All LED light fixtures, with the exception of obstruction lighting (AC 150/5345-43) must be warranted by

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the manufacturer for a minimum of 4 years after date of installation inclusive of all electronics. Obstruction lighting warranty is set by the individual manufacturer.

EQUIPMENT AND MATERIALS

125-2.2 Conduit/Duct. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 Cable and counterpoise. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 Tape. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 Cable connections. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 Retroreflective markers. Not required.

125-2.7 Runway and taxiway lights. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

Lights

| Type | Class | Mode | Style | Option | Base | Filter | Transformer | Basis of Design CCR Loads | Notes (light source and height) |
|-----------|-------|------|-------|------------------|-----------|--------|------------------|---------------------------|---------------------------------------|
| L-861T(L) | 2 | 1 | N/A | 4 (Base Mounted) | See Plans | Blue | Per Manufacturer | 15VA | Taxiway Edge Light (LED and 14" high) |
| L-804(L) | N/A | 1 | N/A | 59 VA | L-867 | Yellow | Per Manufacturer | | 26" Mounting Height |
| L-852G(L) | 2 | 1 | 3 | 34 VA | L-868 | Yellow | Per Manufacturer | | Runway Inpavement Guard Light (LED) |

125-2.8 Runway and taxiway signs. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.

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| Type | Size | Style | Class | Mode | Basis of Design CCR Loads | Notes |
|-----------------|------|---------|-------|------|------------------------------|-------------------------|
| L-858Y, R, L, C | 1 | 2, 3, 5 | 1 | 2 | 85VA | 1 module/1-2 characters |
| | | | | | 95VA | 2 module/3-4 characters |
| | | | | | 95VA | 3 module/5-6 characters |
| | | | | | 95VA | 4 module/7-8 characters |

125-2.9 Runway end identifier light (REIL). The REIL fixtures shall meet the requirements of AC 150/5345-51, Type L-849(L)I, Style E.

125-2.10 Precision approach path indicator (PAPI). The light units for the PAPI shall meet the requirements of AC 150/5345-28, Type L-881, Style B, Class I.

125-2.11 Circuit Selector Cabinet. The circuit selector cabinet shall meet the requirements of AC 150/5345-5, Type L-847, four circuit control, Class B, outdoor, Rating 1 (6.6 amperes).

125-2.12 Light base and transformer housings. Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-867 and L-868, Class 1A, Size B and C shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

125-2.13 Isolation transformers. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

INSTALLATION

125-3.1 Installation. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

A slack of 3 ft (0.9 m), minimum, must be provided in the primary cable at each transformer/connector termination.

Plastic lighting fixture components, such as lamp heads, stems, frangible couplings, base covers, brackets, stakes, are not acceptable.

The tolerance for the height of runway/taxiway edge lights must be ± 1 inch (25 mm). For stake-mounted lights, the specified lighting fixture height must be measured between the top of the stake and the top of the lens. For base-mounted lights, the specified lighting fixture height must be measured between the top of the base flange and the top of the lens, and includes the base cover, the frangible coupling, the stem, the lamp housing and the lens.

Cable/splice/duct markers must be pre-cast concrete of the size shown on plans.

Letters/numbers/arrows for the legend to be impressed into the tops of the markers must be

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pre-assembled and secured in the mold before the concrete is poured. Legends inscribed by hand in wet concrete are not acceptable.

Stencil horizontal and vertical aiming angles on each REIL flash head or equipment enclosure. The numerals must be black and one inch (25 mm) minimum height.

Stencil vertical aiming angles on the outside of each PAPI lamp housing. The numerals must be black and one inch (25 mm) minimum height.

Apply a corrosion inhibiting, anti-seize compound to all screws, nuts and frangible coupling threads. If coated bolts are used per EB #83, do not apply anti-seize compound.

125-3.2 Testing. All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.

125-3.3 Shipping and storage. Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer's recommendations.

125-3.4 Elevated and in-pavement lights. Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

METHOD OF MEASUREMENT

125-4.1 Reflective markers will be measured by the number installed as completed units in place, ready for operation, and accepted by the RPR. Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR. Runway End Identifier Lights shall be measured by each system installed as a completed unit in place, ready for operation, and accepted by the RPR.

Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR. Abbreviated Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign, reflective marker, runway end identification light, precision approach path indicator, or abbreviated precision approach path indicator installed by the Contractor and

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accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

- | | |
|----------------|---|
| Item L-125-5.1 | New L-861T(L), LED taxiway elevated edge light and new base can installed in earth. Includes excavation, fixture, L-867 base can, concrete, conduit, carbon steel coated bolts, backfill, grounding, ground rods, safety ground, circuit identification, transformer, rock, labor, testing, and etc. complete in place. – Price per each |
| Item L-125-5.2 | Relocate L-861T(L), LED taxiway elevated edge light with new base can installed in earth. Includes excavation, relocation of fixture, L-867 base can, concrete, conduit, carbon steel coated bolts, backfill, grounding, ground rods, safety ground, circuit identification, transformer, rock, labor, testing, and etc. complete in place. – Price per each |
| Item L-125-5.3 | Relocate L-861T(L), LED taxiway elevated edge light with new base can installed in new pavement. Includes excavation, coring of pavement, saw cutting, relocation of fixture, L-867 telescopic base can, concrete, conduit, carbon steel coated bolts, backfill, grounding, ground rods, safety ground, identification, transformer, labor, testing, and etc. complete in place. – Price per each |
| Item L-125-5.4 | Relocate L-861T(L), LED taxiway elevated edge light with new base can installed in existing pavement. Includes excavation, coring of pavement, saw cutting, relocation of fixture, L-867 telescopic base can, concrete, conduit, carbon steel coated bolts, backfill, grounding, ground rods, safety ground, identification, transformer, labor, testing, and etc. complete in place. – Price per each |
| Item L-125-5.5 | Relocate L-852(L), LED, flush runway guard light with new 2-piece L-868 base can installed in new pavement. Includes excavation, coring of pavement, saw cutting, relocation of fixture and control module, L-868 2-piece can, space rings, damn ring, conduit, carbon steel coated bolts, backfill, concrete, rebar, P-605, P-606, safety ground, circuit identification, labor, testing, survey, and etc. complete in place. – Price per each |
| Item L-125-5.6 | Relocate L-804(L), LED elevated runway guard light with new base can installed in earth. Includes excavation, relocation of fixture, L-867 base can, concrete, conduit, carbon steel coated bolts, backfill, grounding, ground rods, safety ground, circuit identification, transformer, rock, labor, testing, and etc. complete in place. – Price per each |
| Item L-125-5.7 | New L-858(L), size 1, 3-4 characters LED guidance sign and |

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concrete base installed in earth. Includes excavation, concrete, WWF/rebar, junction can, steel cover, tethers, sign panels, sign, LED light bars, LED Drivers, on/off switch, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, sod restoration, concrete, identification, labor and etc. for a complete working system in place. – Price per each

Item L-125-5.8 New L-858(L), size 1, 5-6 characters LED guidance sign and concrete base installed in earth. Includes excavation, concrete, WWF/rebar, junction can, steel cover, tethers, sign panels, sign, LED light bars, LED Drivers, on/off switch, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, sod restoration, concrete, identification, labor and etc. for a complete working system in place. – Price per each

Item L-125-5.9 New L-858(L), size 1, 7-8 characters LED guidance sign and concrete base installed in earth. Includes excavation, concrete, WWF/rebar, junction can, steel cover, tethers, sign panels, sign, LED light bars, LED Drivers, on/off switch, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, sod restoration, concrete, identification, labor and etc. for a complete working system in place. – Price per each

Item L-125-5.10 New L-858(L), size 1, 3-4 characters LED guidance sign and concrete base installed in new pavement. Includes excavation, concrete, WWF/rebar, junction can, steel cover, tethers, sign panels, sign, LED light bars, LED Drivers, on/off switch, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, saw cutting, concrete, identification, labor and etc. for a complete working system in place. – Price per each

Item L-125-5.11 Repanel L-858(L), size 1, 2 module LED guidance sign with allowance account sign legend panels. Includes coordination with existing sign manufacturer, installation of allowance account sign legend panels, taxes/delivery, disposal, delivery of salvage material to owner, identification, labor and etc. for a complete working system in place. – Price per each

Item L-125-5.12 Repanel L-858(L), size 1, 3 module LED guidance sign with allowance account sign legend panels. Includes coordination with existing sign manufacturer, installation of allowance account sign legend panels, taxes/delivery, disposal, delivery of salvage material to owner, identification, labor and etc. for a complete working system in place. – Price per each

Item L-125-5.13 Relocate L-858(L), size 1, 2 module LED guidance sign with new concrete base installed in earth. Includes excavation, concrete,

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- WWF/rebar, junction can, steel cover, tethers, relocation of sign, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, sod restoration, concrete, identification, labor and etc. for a complete working system in place. – Price per each
- Item L-125-5.14 Relocate L-858(L), size 1, 3 module LED guidance sign with new concrete base installed in earth. Includes excavation, concrete, WWF/rebar, junction can, steel cover, tethers, relocation of sign, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, sod restoration, concrete, identification, labor and etc. for a complete working system in place. – Price per each
- Item L-125-5.15 Relocate L-858(L), size 1, 4 module LED guidance sign with new concrete base installed in earth. Includes excavation, concrete, WWF/rebar, junction can, steel cover, tethers, relocation of sign, transformer, hardware, carbon steel bolts, anchor bolts, conduits, conductors, counterpoise, grounding, testing, wiring, connector kits, backfill, sod restoration, concrete, identification, labor and etc. for a complete working system in place. – Price per each
- Item L-125-5.16 Removal of existing guidance sign and concrete base in earth/existing pavement, complete. Includes backfill, saw cutting, sod, disposal, connector kits, disconnection and removal of existing circuit conductors, reconnection of existing circuit, capping of conduits, temporary conduit and conductors, labor and etc., complete in place. – Price per each
- Item L-125-5.17 Removal of existing obstruction lighting system, complete. Includes disconnection, removal and disposal, labor and etc., complete in place. – Price per each
- Item L-125-5.18 Intercept existing circuit conductors in existing base can/ manhole /junction can and extend circuits accordingly. Includes dewatering, identification, connector kits, labor, and etc. complete in place. – Price per each
- Item L-125-5.19 Identification of cables, ductbanks and lighting fixtures per FAA specifications. Includes concrete duct markers, removal of existing bronze markers and cable tags, new bronze marker and cable tags, removal of existing circuit conductors, dewatering, labor and etc., complete in place. – Price per lump sum
- Item L-125-5.20 Installation of Allowance Account ALCMS Graphic Updates, complete. Includes coordination with ALCMS manufacturer, testing, coordination, identification, labor and etc. for a complete working system in place. - Price Per Lump Sum.
- Item L-125-5.21 Allowance Account: Modify existing Airfield Lighting Control and Monitoring System (ALCMS), complete. Includes updating of

INSTALLATION OF AIRPORT LIGHTING SYSTEMS

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touchscreen graphics and control strategies, shop drawings, coordination, testing, labor and etc. for a complete working system in place. Allowance Account cost has been coordinated and agreed upon with the Airfield Lighting Control and Monitoring System (ALCMS) manufacturer prior to Bid. Payment for the Allowance Account item shall not include Contractor markup. Contractor shall include their cost associated with the ALCMS item under the "Installation of Allowance Account ALCMS Graphic Updates, complete" item. ALCMS manufacturer invoice shall be submitted to the Owner and only the amount listed on the invoice is billable to the Allowance Account. – Allowance

Item L-125-5.22

Allowance Account: New L-858(L) sign panels for existing ADB signs per sign schedule. Includes sign panels, shop drawings etc. Allowance Account cost has been coordinated and agreed upon with the existing airfield guidance sign manufacturer for legend panel replacements prior to Bid. Payment for the Allowance Account item shall not include Contractor markup. Contractor shall include their cost associated with the sign legend panel replacement under the Repanel L-858(L) guidance sign items. Sign manufacturer invoice shall be submitted to the Owner and only the amount listed on the invoice is billable to the Allowance Account. – Allowance

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

| | |
|----------------|--|
| AC 150/5340-18 | Standards for Airport Sign Systems |
| AC 150/5340-26 | Maintenance of Airport Visual Aid Facilities |
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
| AC 150/5345-5 | Circuit Selector Switch |
| AC 150/5345-7 | Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits |
| AC 150/5345-26 | Specification for L-823 Plug and Receptacle, Cable Connectors |
| AC 150/5345-28 | Precision Approach Path Indicator (PAPI) Systems |
| AC 150/5345-39 | Specification for L-853, Runway and Taxiway Retroreflective Markers |
| AC 150/5345-42 | Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories |
| AC 150/5345-44 | Specification for Runway and Taxiway Signs |
| AC 150/5345-46 | Specification for Runway and Taxiway Light Fixtures |

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| | |
|------------------------|---|
| AC 150/5345-47 | Specification for Series to Series Isolation Transformers for Airport Lighting Systems |
| AC 150/5345-51 | Specification for Discharge-Type Flashing Light Equipment |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program |
| Engineering Brief (EB) | |
| EB No. 67 | Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures |

END OF ITEM L-125

APPENDICES

APPENDIX "A"

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DISADVANTAGED BUSINESS ENTERPRISE**Regulations: 49 CFR Part 26**

The City of Fort Lauderdale's overall DBE race-conscious goal for this project is **7.70%**. The bidder shall exercise a good faith effort towards attainment of the overall goal. The bidder's performance towards attainment of the overall goal is to be measured as a percentage of the total dollar value of the contract. Contractors or subcontractors proposed for meeting the overall DBE goal **MUST BE CERTIFIED** as a DBE by one of the following public agencies: Palm Beach County, Broward County, Miami-Dade County, Florida Department of Transportation, or other public agency whose requirement for DBE certification are functionally equivalent to or more stringent than any of the above-listed agencies. The bidder must submit evidence of such **CERTIFICATION** with the bid. Previous or current **REGISTRATION** as a DBE contractor with the City of Fort Lauderdale, by itself, does not meet the above requirements, nor does completion of City of Fort Lauderdale "Prime Contractor Identification Form(s)" provided herein. Those forms are intended for purposes of identification and registration only, and do not meet the certification requirements for this project. Bidder must also submit evidence of current **CERTIFICATION** for proposed DBE contractors under other qualifying program(s) as identified above, with the bid proposal. The owner requires the submission of Forms 1 & 2 with the bid proposal.

DBE's

| <u>DBE Group Names/Addresses/Identity*</u> | <u>Subcontract Work Item</u> | <u>Dollar Value of Subcontract Work</u> |
|--|------------------------------|---|
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| Total Dollar Value of Subcontract Work | | \$ _____ |
| Total Dollar Value of Basic Bid | | \$ _____ |
| Total DBE Percent | | \$ _____ |

* (Black, Hispanic, Asian American, American Indian, Women regardless of ethnicity, and other socially and economically disadvantaged)

The bidder may be required to submit supplemental information in accordance with Appendix A, Part III, to document good faith efforts towards meeting the overall DBE Participation goal.

SEE DEFINITIONS IN APPENDIX A, PART III, SHEET DBE-5.

Demonstration of Good Faith Efforts - Forms 1 & 2**FORM 1: DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION**

The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner (please check the appropriate space):

_____ The bidder/offeror is committed to a minimum of _____ % DBE utilization on this contract.

_____ The bidder/offeror (if unable to meet the DBE goal of _____ %) is committed to a minimum of _____ % DBE utilization on this contract and should submit documentation demonstrating good faith efforts.

Name of bidder/offeror's firm: _____

State Registration No. _____

By _____ Title
(Signature)

FORM 2: LETTER OF INTENT

Name of bidder/offeror's firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Name of DBE firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Description of work to be performed by DBE firm:

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above.
The estimated dollar value of this work is \$ _____.

Affirmation

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above and that the firm is DBE certified to perform the specific trades.

By _____
(Signature)

Date: _____

(Title)

If the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

Submit this page for each DBE subcontractor.

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BID CONDITIONS
DISADVANTAGED BUSINESS ENTERPRISE OWNER

The following bid conditions apply to this Department of Transportation (DOT) assisted contract. Submission of a bid/proposal by a prospective contractor shall constitute full acceptance of these bid conditions.

1. Definition. Disadvantaged Business Enterprise (DBE) as used in this contract shall have the same meaning as defined in Paragraph 26.5 in 49 CFR Part 26.
2. Policy. It is the policy of DOT that DBE's as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 applies to this contract.
3. Obligation. The contractor agrees to ensure that DBE's as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. In this regard, all contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBE's have the maximum opportunity to compete for and perform contracts. Contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of DOT assisted contracts.
4. Compliance. All bidders, potential contractors, or subcontractors for this DOT assisted contract are hereby notified that failure to carry out the DOT policy and the DBE obligation, as set forth above, shall constitute a breach of contract which may result in termination of the contract or such other remedy as deemed appropriate by the owner.
5. Subcontract Clause. All bidders and potential contractors hereby assure that they will include the above clauses in all subcontracts that offer further subcontracting opportunities.
6. Contract Award. Bidders are hereby advised that meeting the DBE subcontract goal or making an acceptable good faith effort to meet said goal are conditions of being awarded this DOT assigned contract.

The owner proposes to award the contract to the lowest responsive and responsible bidder submitting a reasonable bid provided he has met the goal for DBE participation or, if failing to meet the goal, he has made an acceptable good faith effort to meet the established goal for DBE participation. Bidder is advised that the owner reserves the right to reject any or all bids submitted.

7. DBE Participation Goal. The City of Fort Lauderdale will meet the maximum feasible portion of its overall goal of 7.70% by using race-neutral means of facilitating DBE participation. The City of Fort Lauderdale estimates that, in meeting its overall DBE goal of 9.34%, it will obtain 1.64% from race neutral participation and 7.70% through race-conscious measures.

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8. Available DBE'S. The owner has on file a DBE program that has been approved by the Federal Aviation Administration. This program contains a listing of DBE's (certified and uncertified). Bidders are encouraged to inspect this list in locating DBE's for the work. Other DBE's may be added to the list in accordance with the owner's approved DBE's program. Credit toward the DBE goal will not be counted unless the DBE to be used can be certified by the owner.
9. Contractor's Required Submission. The owner requires the submission of the following information with the bid proposal. Certain other DBE information may also be required.

MBE's

| <u>MBE Subcontractors Names/Addresses/Identity*</u> | <u>Subcontract Work Item</u> | <u>Dollar Value of Subcontract Work</u> |
|---|------------------------------|---|
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |

WBE's

| <u>WBE Subcontractors Names/Addresses/Identity*</u> | <u>Subcontract Work Item</u> | <u>Dollar Value of Subcontract Work</u> |
|---|------------------------------|---|
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |

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DBE's

| <u>DBE Group Names/Addresses/Identity*</u> | <u>Subcontract Work Item</u> | <u>Dollar Value of Subcontract Work</u> |
|--|------------------------------|---|
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| _____ | _____ | \$ _____ |
| Total Dollar Value of Subcontract Work | | \$ _____ |
| Total Dollar Value of Basic Bid | | \$ _____ |
| Total DBE Percent | | \$ _____ |

(Black, Hispanic, Asian American, American Indian, Women regardless of ethnicity, and other economically disadvantaged)

If the contractor fails to meet the contract goal established in Paragraph 7 above, the following information must be submitted prior to contract award to assist the owner in determining whether or not the contractor made acceptable good faith efforts to meet the contract goal. This information (when applicable), as well as the DBE information, should be submitted as specified in Paragraph 9 above.

Suggested guidance for use in determining if good faith efforts were made by a contractor are included in Appendix A to 49 CFR Part 26, Subpart F, revised as of December 30, 2005.

A list of efforts that a contractor may make and the owner may use in making a determination as to the acceptability of a contractor's efforts to meet the goal as included in Appendix A are as follows:

- a. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by the recipient to inform DBE's of contracting and subcontracting opportunities;
- b. Whether the contractor advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
- c. Whether the contractor provided written notice to a reasonable number of specific DBE's that their interest in the contract was being solicited in sufficient time to allow the DBE's to participate effectively;

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- d. Whether the contractor followed up initial solicitations of interest by contracting DBE's to determine with certainty whether the DBE's were interested;
- e. Whether the contractor selected portions of work to be performed by DBE's in order to increase the likelihood of meeting the DBE goal (including, where appropriate, breaking down contracts into economically feasible units to facilitate DBE participation);
- f. Whether the contractor provided interested DBE's with adequate information about the plans, specifications, and requirements of the contract;
- g. Whether the contractor negotiated in good faith with interested DBE'S, not rejecting DBE's as unqualified without sound reasons based on a thorough investigation of their capabilities;
- h. Whether the contractor made efforts to assist interested DBE's in obtaining bonding, lines or credit, or insurance required by the recipient or contractor, and
- i. Whether the contractor effectively used the services of available minority community organizations; minority contractor's groups; local and state Federal Minority Business Assistance Offices; and other organizations that provide assistance in the recruitment and placement of DBE'S.

NOTE: The nine items set forth above are merely suggested criteria and the owner may specify that you submit information on certain other actions a contractor took to secure DBE participation in an effort to meet the goals. A contractor may also submit to the owner other information on efforts to meet the goals.

10. Contractor Assurance. The bidder hereby assures that he will meet one of the following as appropriate:

- a. The DBE participation goal as established in Paragraph 7 above.
- b. The DBE participation percentage as shown in Paragraph 9 which was submitted as a condition of contract award.

Agreements between bidder/proposer and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders/proposers are prohibited. The bidder shall make a good faith effort to replace a DBE subcontract that is unable to perform successfully with another DBE subcontractor. Substitution must be coordinated and approved by the owner.

The bidder shall establish and maintain records and submit regular reports, as required, which will identify and access progress in achieving DBE subcontract goals and other DBE affirmative action efforts.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE) DEFINITIONS

A DBE means a for-profit small business concern.

1. That is at least 51 percent (51%) owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent (51%) of the stock is owned by one or more such individuals; and
2. Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

Socially and Economically Disadvantaged Individual means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is

1. **Any individual** who The City of Fort Lauderdale finds to be a socially and economically disadvantaged individual on a case-by-case basis.
2. **Any individual** in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
3. **"Black Americans,"** which includes persons having origins in any of the Black racial groups of Africa;
4. **"Hispanic Americans,"** which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
5. **"Native Americans,"** which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
6. **"Asian-Pacific Americans,"** which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
7. **"Subcontinent Asian Americans,"** which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
8. **"Women,"** regardless of ethnicity;
9. **Any additional groups** whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

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10. Tribally owned Concern means any concern at least 51 percent (51%) owned by an Indian tribe as defined in this section.

Listed below are some agencies that certify DBEs.

DBE CERTIFYING AGENCIES

Division of Economic and Small Business Development

115 South Andrews Avenue, Annex 680

Fort Lauderdale, Florida 33301

Telephone: (954) 357-6400

Internet Address: <http://www.co.broward.fl.us/eeo>

Florida Department of Transportation

605 Suwannee Street, MS65

Tallahassee, Florida 32399-0450

Telephone: (850) 414-4747

Internet Address: www.dot.state.fl.us/equalopportunityoffice

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MONTHLY CONTRACTOR DBE UTILIZATION REPORT**PART A**

INSTRUCTIONS: This form must be filed each month to report actual DBE participation by certified Contractors for work done the preceding month

Contract Number: _____ Contract Name: _____ Reporting Period: _____

Prime Contractor: _____ Contract Amount (as amended): \$ _____

Amount of Payment Invoice this Period: \$ _____ Amount Invoiced for DBE Subcontractor this Period: \$ _____

Total Amount Invoiced to Date: \$ _____ Total Amount Invoiced for DBE Subcontractor to Date: \$ _____

| Name of DBE | Contract Amount | Description of Work | Actual Amount Paid to DBE This Period | Amount Paid to DBE to Date | Actual Starting Date | Scheduled Completion Date |
|-------------|-----------------|---------------------|---------------------------------------|----------------------------|----------------------|---------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

- | | | | |
|----|--|--------------------------|--------------------------|
| | | Yes | No |
| 1) | Did any of the DBE subcontractors rent/lease equipment from the prime contractor or an affiliate company during the report period? If yes, explain the arrangement, including a description of the equipment and the cost. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2) | Did any of the DBE subcontractors utilize employees or former employees of the prime contractor or an affiliate company during the reporting period? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3) | Did any of the DBE subcontractors subcontract any portion of its work to a non-DBE during the report period? If yes, explain fully. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4) | Has the scope of work or the subcontract amount for any of the DBE subcontractors changed since the last report? If yes, explain fully. | <input type="checkbox"/> | <input type="checkbox"/> |

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MONTHLY CONTRACTOR DBE UTILIZATION REPORT**PART B**

| <u>Type of Work</u> | <u>Name of DBE</u> | Description of Work | Minority Group # | Male/Female Owned |
|----------------------------|---------------------------|----------------------------|-------------------------|--------------------------|
| Professional/Consultant | | | | |
| Construction | | | | |
| Supplies | | | | |
| Equipment | | | | |
| Other | | | | |

• Note, Under Minority Group Enter:

B-Black American

I-Asian American

H-Hispanic

P-Asian Pacific American

N-Native American

O-Other

By signing this form, the person individually and on behalf of the Contractor represents to the TCRA that the information contained herein is truthful, accurate, complete and not misleading.

AUTHORIZATION SIGNATURE: _____ TITLE: _____ DATE: _____

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MONTHLY EMPLOYEE UTILIZATION REPORT

This report is required by Executive Order 11246, Sec. 203. Failure to report may result in contracts being canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further federal funded contracts.

| | | | | | | | | | |
|---|---------------------------------------|--|---|-----------------|--|--|---------------|--------------------------------------|------------------------------------|
| Reporting Period From _____ To _____ | | Name, Address, & Telephone No. of Contractors or Vendor | | | | | | | |
| <u>Classifications</u> | Total No. of Employees | Total No. of Minority & Female Emp. | Black-Not of Hispanic Origin | <u>Hispanic</u> | Asian or Pacific Islander | American Indian or Alaskan Native | <u>Female</u> | Minority Percentage * | Female Percentage * |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| Company Official Signature & Title | | | | | | Date Signed | | Page _____ of _____ | |

- This item presents a percentage of the total number of hours worked on said contract for the reporting period.

UR-3

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

General Decision Number: FL190160 01/04/2019 FL160

Superseded General Decision Number: FL20180203

State: Florida

Construction Type: Highway

County: Broward County in Florida.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0 01/04/2019

* SUFL2013-021 08/19/2013

| | Rates | Fringes |
|----------------|----------|---------|
| CARPENTER..... | \$ 16.05 | 0.00 |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

CEMENT MASON/CONCRETE

| | | |
|---|----------|------|
| FINISHER, Includes Form Work..... | \$ 15.31 | 0.00 |
| ELECTRICIAN..... | \$ 22.15 | 0.00 |
| FENCE ERECTOR..... | \$ 12.82 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)..... | \$ 15.75 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Painter..... | \$ 12.13 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Operator (Spray Nozzleman)..... | \$ 11.94 | 0.00 |
| INSTALLER - GUARDRAIL..... | \$ 12.37 | 0.00 |
| IRONWORKER, ORNAMENTAL..... | \$ 13.48 | 0.00 |
| IRONWORKER, REINFORCING..... | \$ 16.84 | 0.00 |
| IRONWORKER, STRUCTURAL..... | \$ 16.42 | 0.00 |
| LABORER (Traffic Control Specialist incl. placing of cones/barricades/barrels - Setter, Mover, Sweeper)..... | \$ 11.57 | 0.00 |
| LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor..... | \$ 11.84 | 0.00 |
| LABORER: Common or General..... | \$ 10.76 | 0.00 |
| LABORER: Flagger..... | \$ 12.53 | 0.00 |
| LABORER: Grade Checker..... | \$ 12.41 | 0.00 |
| LABORER: Landscape & Irrigation..... | \$ 9.12 | 0.00 |
| LABORER: Mason Tender - Cement/Concrete..... | \$ 13.91 | 3.50 |
| LABORER: Pipelayer..... | \$ 14.61 | 0.00 |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

| | | |
|---------------------------------|----------|------|
| OPERATOR: | | |
| Backhoe/Excavator/Trackhoe..... | \$ 15.43 | 0.00 |
| OPERATOR: Bobcat/Skid | | |
| Steer/Skid Loader..... | \$ 12.88 | 0.00 |
| OPERATOR: Boom..... | \$ 18.50 | 0.00 |
| OPERATOR: Boring Machine..... | \$ 17.33 | 0.00 |
| OPERATOR: Broom/Sweeper..... | \$ 13.41 | 0.00 |
| OPERATOR: Bulldozer..... | \$ 17.07 | 0.00 |
| OPERATOR: Concrete Finishing | | |
| Machine..... | \$ 15.44 | 0.00 |
| OPERATOR: Concrete Saw..... | \$ 13.76 | 0.00 |
| OPERATOR: Crane..... | \$ 19.14 | 0.00 |
| OPERATOR: Curb Machine..... | \$ 21.33 | 0.00 |
| OPERATOR: Distributor..... | \$ 13.13 | 0.00 |
| OPERATOR: Drill..... | \$ 14.78 | 0.00 |
| OPERATOR: Forklift..... | \$ 16.32 | 0.00 |
| OPERATOR: Gradall..... | \$ 14.71 | 0.00 |
| OPERATOR: Grader/Blade..... | \$ 18.98 | 0.00 |
| OPERATOR: Loader..... | \$ 13.84 | 0.00 |
| OPERATOR: Mechanic..... | \$ 18.03 | 0.00 |
| OPERATOR: Milling Machine..... | \$ 14.89 | 0.00 |
| OPERATOR: Oiler..... | \$ 16.32 | 0.00 |
| OPERATOR: Paver (Asphalt, | | |
| Aggregate, and Concrete)..... | \$ 14.34 | 0.00 |
| OPERATOR: Piledriver..... | \$ 17.23 | 0.00 |
| OPERATOR: Post Driver | | |
| (Guardrail/Fences)..... | \$ 13.71 | 0.00 |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

| | | |
|----------------------------------|----------|------|
| OPERATOR: Roller..... | \$ 13.10 | 0.00 |
| OPERATOR: Scraper..... | \$ 12.01 | 0.00 |
| OPERATOR: Screed..... | \$ 14.85 | 0.00 |
| OPERATOR: Tractor..... | \$ 12.62 | 0.00 |
| OPERATOR: Trencher..... | \$ 14.58 | 0.00 |
| PAINTER: Spray..... | \$ 16.52 | 0.00 |
| SIGN ERECTOR..... | \$ 14.23 | 0.00 |
| TRAFFIC SIGNALIZATION: | | |
| Traffic Signal Installation..... | \$ 14.74 | 0.00 |
| TRUCK DRIVER: Distributor | | |
| Truck..... | \$ 14.96 | 2.17 |
| TRUCK DRIVER: Dump Truck..... | \$ 11.71 | 0.00 |
| TRUCK DRIVER: Flatbed Truck..... | \$ 14.28 | 0.00 |
| TRUCK DRIVER: Lowboy Truck..... | \$ 14.06 | 0.00 |
| TRUCK DRIVER: Slurry Truck..... | \$ 11.96 | 0.00 |
| TRUCK DRIVER: Vector Truck..... | \$ 14.21 | 0.00 |
| TRUCK DRIVER: Water Truck..... | \$ 13.22 | 0.00 |

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.)

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

General Decision Number: FL190178 01/04/2019 FL178

Superseded General Decision Number: FL20180221

State: Florida

Construction Type: Highway

County: Miami-Dade County in Florida.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0 01/04/2019

* ELEC0349-002 03/05/2018

| | Rates | Fringes |
|------------------|----------|---------|
| ELECTRICIAN..... | \$ 33.11 | 12.31 |

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PROJECT 12708

SUFL2013-039 08/19/2013

| | Rates | Fringes |
|---|----------|---------|
| CARPENTER..... | \$ 17.84 | 0.00 |
| CEMENT MASON/CONCRETE | | |
| FINISHER, Includes Form Work..... | \$ 15.49 | 0.00 |
| FENCE ERECTOR..... | \$ 12.82 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)..... | \$ 15.07 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Painter..... | \$ 12.13 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Operator (Spray Nozzleman)..... | \$ 11.16 | 0.00 |
| INSTALLER - GUARDRAIL..... | \$ 13.43 | 0.00 |
| IRONWORKER, ORNAMENTAL..... | \$ 13.48 | 0.00 |
| IRONWORKER, REINFORCING..... | \$ 18.43 | 0.00 |
| IRONWORKER, STRUCTURAL..... | \$ 16.42 | 0.00 |
| LABORER (Traffic Control Specialist incl. placing of cones/barricades/barrels - Setter, Mover, Sweeper)..... | \$ 11.59 | 0.00 |
| LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor..... | \$ 12.31 | 0.00 |
| LABORER: Common or General..... | \$ 10.69 | 0.00 |
| LABORER: Flagger..... | \$ 12.53 | 0.00 |
| LABORER: Grade Checker..... | \$ 12.41 | 0.00 |
| LABORER: Landscape & Irrigation..... | \$ 9.02 | 0.00 |
| LABORER: Mason Tender - Cement/Concrete..... | \$ 13.91 | 3.50 |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

| | | |
|---------------------------------|----------|------|
| LABORER: Pipelayer..... | \$ 15.02 | 0.00 |
| OPERATOR: | | |
| Backhoe/Excavator/Trackhoe..... | \$ 16.24 | 0.00 |
| OPERATOR: Bobcat/Skid | | |
| Steer/Skid Loader..... | \$ 12.88 | 0.00 |
| OPERATOR: Boom..... | \$ 18.95 | 0.00 |
| OPERATOR: Boring Machine..... | \$ 15.29 | 0.00 |
| OPERATOR: Broom/Sweeper..... | \$ 13.01 | 0.00 |
| OPERATOR: Bulldozer..... | \$ 16.77 | 0.00 |
| OPERATOR: Concrete Finishing | | |
| Machine..... | \$ 15.44 | 0.00 |
| OPERATOR: Concrete Saw..... | \$ 14.43 | 0.00 |
| OPERATOR: Crane..... | \$ 22.46 | 0.00 |
| OPERATOR: Curb Machine..... | \$ 20.74 | 0.00 |
| OPERATOR: Distributor..... | \$ 13.29 | 0.00 |
| OPERATOR: Drill..... | \$ 14.78 | 0.00 |
| OPERATOR: Forklift..... | \$ 16.32 | 0.00 |
| OPERATOR: Gradall..... | \$ 14.71 | 0.00 |
| OPERATOR: Grader/Blade..... | \$ 20.22 | 3.85 |
| OPERATOR: Loader..... | \$ 15.53 | 0.00 |
| OPERATOR: Mechanic..... | \$ 18.03 | 0.00 |
| OPERATOR: Milling Machine..... | \$ 14.67 | 0.00 |
| OPERATOR: Oiler..... | \$ 16.32 | 0.00 |
| OPERATOR: Paver (Asphalt, | | |
| Aggregate, and Concrete)..... | \$ 13.61 | 0.00 |
| OPERATOR: Piledriver..... | \$ 17.23 | 0.00 |
| OPERATOR: Post Driver | | |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

| | | |
|----------------------------------|----------|------|
| (Guardrail/Fences)..... | \$ 14.45 | 0.00 |
| OPERATOR: Roller..... | \$ 13.67 | 0.00 |
| OPERATOR: Scraper..... | \$ 12.01 | 0.00 |
| OPERATOR: Screed..... | \$ 14.15 | 0.00 |
| OPERATOR: Tractor..... | \$ 12.19 | 0.00 |
| OPERATOR: Trencher..... | \$ 14.74 | 0.00 |
| PAINTER: Spray..... | \$ 16.52 | 0.00 |
| SIGN ERECTOR..... | \$ 12.96 | 0.00 |
| TRAFFIC SIGNALIZATION: | | |
| Traffic Signal Installation..... | \$ 19.07 | 0.00 |
| TRUCK DRIVER: Distributor | | |
| Truck..... | \$ 14.96 | 2.17 |
| TRUCK DRIVER: Dump Truck..... | \$ 12.19 | 0.00 |
| TRUCK DRIVER: Flatbed Truck..... | \$ 14.28 | 0.00 |
| TRUCK DRIVER: Lowboy Truck..... | \$ 15.07 | 0.00 |
| TRUCK DRIVER: Slurry Truck..... | \$ 11.96 | 0.00 |
| TRUCK DRIVER: Vector Truck..... | \$ 14.21 | 0.00 |
| TRUCK DRIVER: Water Truck..... | \$ 13.17 | 1.60 |

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP**PROJECT 12708**

General Decision Number: FL190182 01/04/2019 FL182

Superseded General Decision Number: FL20180225

State: Florida

Construction Type: Highway

County: Palm Beach County in Florida.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0 01/04/2019

* SUFL2013-043 08/19/2013

| | Rates | Fringes |
|-------------------------------------|----------|---------|
| CARPENTER, Includes Form Work..... | \$ 15.38 | 0.00 |
| CEMENT MASON/CONCRETE FINISHER..... | \$ 15.69 | 0.00 |

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PROJECT 12708

| | | |
|---|----------|------|
| ELECTRICIAN..... | \$ 18.20 | 0.00 |
| FENCE ERECTOR..... | \$ 12.82 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)..... | \$ 15.09 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Painter..... | \$ 12.13 | 0.00 |
| HIGHWAY/PARKING LOT STRIPING: Operator (Spray Nozzleman)..... | \$ 11.81 | 0.00 |
| INSTALLER - GUARDRAIL..... | \$ 13.96 | 0.00 |
| IRONWORKER, ORNAMENTAL..... | \$ 13.48 | 0.00 |
| IRONWORKER, REINFORCING..... | \$ 16.58 | 0.00 |
| IRONWORKER, STRUCTURAL..... | \$ 16.42 | 0.00 |
| LABORER (Traffic Control Specialist incl. placing of cones/barricades/barrels - Setter, Mover, Sweeper)..... | \$ 12.97 | 0.00 |
| LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor..... | \$ 12.99 | 0.00 |
| LABORER: Common or General..... | \$ 10.66 | 0.00 |
| LABORER: Flagger..... | \$ 12.53 | 0.00 |
| LABORER: Grade Checker..... | \$ 12.41 | 0.00 |
| LABORER: Landscape & Irrigation..... | \$ 9.02 | 0.00 |
| LABORER: Mason Tender - Cement/Concrete..... | \$ 13.91 | 3.50 |
| LABORER: Pipelayer..... | \$ 14.82 | 0.00 |
| OPERATOR: Backhoe/Excavator/Trackhoe..... | \$ 15.66 | 0.00 |
| OPERATOR: Bobcat/Skid Steer/Skid Loader..... | \$ 12.88 | 0.00 |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

| | | |
|--|----------|------|
| OPERATOR: Boom..... | \$ 18.95 | 0.00 |
| OPERATOR: Boring Machine..... | \$ 16.23 | 0.00 |
| OPERATOR: Broom/Sweeper..... | \$ 12.70 | 0.00 |
| OPERATOR: Bulldozer..... | \$ 16.00 | 0.00 |
| OPERATOR: Concrete Finishing Machine..... | \$ 15.44 | 0.00 |
| OPERATOR: Concrete Saw..... | \$ 16.22 | 0.00 |
| OPERATOR: Crane..... | \$ 21.66 | 0.00 |
| OPERATOR: Curb Machine..... | \$ 20.76 | 0.00 |
| OPERATOR: Distributor..... | \$ 14.76 | 0.00 |
| OPERATOR: Drill..... | \$ 14.78 | 0.00 |
| OPERATOR: Forklift..... | \$ 16.32 | 0.00 |
| OPERATOR: Gradall..... | \$ 15.75 | 0.91 |
| OPERATOR: Grader/Blade..... | \$ 20.25 | 0.00 |
| OPERATOR: Grinding/Grooving Machine..... | \$ 13.87 | 0.00 |
| OPERATOR: Loader..... | \$ 14.19 | 0.00 |
| OPERATOR: Mechanic..... | \$ 18.03 | 0.00 |
| OPERATOR: Milling Machine..... | \$ 15.60 | 0.00 |
| OPERATOR: Oiler..... | \$ 16.32 | 0.00 |
| OPERATOR: Paver (Asphalt, Aggregate, and Concrete)..... | \$ 14.73 | 2.36 |
| OPERATOR: Piledriver..... | \$ 17.23 | 0.00 |
| OPERATOR: Post Driver (Guardrail/Fences)..... | \$ 14.45 | 0.00 |
| OPERATOR: Roller..... | \$ 13.03 | 0.00 |
| OPERATOR: Scraper..... | \$ 12.01 | 0.00 |

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

| | | |
|---|----------|------|
| OPERATOR: Screed..... | \$ 15.51 | 0.00 |
| OPERATOR: Tractor..... | \$ 10.79 | 0.00 |
| OPERATOR: Trencher..... | \$ 14.74 | 0.00 |
| PAINTER: Spray..... | \$ 16.52 | 0.00 |
| SIGN ERECTOR..... | \$ 14.02 | 0.00 |
| TRUCK DRIVER: Distributor Truck..... | \$ 14.96 | 2.17 |
| TRUCK DRIVER: Dump Truck..... | \$ 11.84 | 0.00 |
| TRUCK DRIVER: Flatbed Truck..... | \$ 14.28 | 0.00 |
| TRUCK DRIVER: Lowboy Truck..... | \$ 13.98 | 0.00 |
| TRUCK DRIVER: Slurry Truck..... | \$ 11.96 | 0.00 |
| TRUCK DRIVER: Vactor Truck..... | \$ 14.21 | 0.00 |
| TRUCK DRIVER: Water Truck..... | \$ 13.25 | 0.00 |

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

date for the classifications and rates under that identifier. Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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| Sheet Number | Sheet Title |
|--------------|---|
| C00 | COVER SHEET |
| C01 | GENERAL NOTES |
| C02 | SUMMARY OF QUANTITIES |
| C03 | KEY MAP |
| C04 | ACCESS AND STAGING PLAN |
| C05 | SAFETY NOTES AND DETAILS |
| C06 | PHASING PLAN 1 |
| C07 | PHASING PLAN 2 |
| C08 | PHASING PLAN 3 |
| C09 | PHASING PLAN 4 |
| C10 | PHASING PLAN 5 |
| C11 | PHASING PLAN 6 |
| C12 | PHASING PLAN 7 |
| C13 | PHASING SCHEDULE |
| C14 | EXISTING CONDITIONS |
| C15 | EXISTING CONDITIONS |
| C16 | PROJECT LAYOUT - SURVEY CONTROL PLAN |
| C17 | TYPICAL SECTIONS |
| C18 | TYPICAL SECTIONS |
| C19 | EROSION CONTROL PLAN |
| C20 | EROSION CONTROL DETAILS |
| C21 | DEMOLITION PLANS |
| C22 | DEMOLITION PLANS |
| C22A | DEMOLITION PLANS - ALT 1 |
| C23 | DEMOLITION LOCATION COORDINATES |
| C23A | DEMOLITION LOCATION COORDINATES - ALT 1 |
| C24 | PAVEMENT DEMOLITION DETAILS |
| C25 | PAVEMENT GEOMETRY PLAN |
| C26 | PAVEMENT GEOMETRY PLAN |
| C26A | PAVEMENT GEOMETRY PLAN - ALT 1 |
| C27 | PAVEMENT GEOMETRY COORDINATES |
| C27A | PAVEMENT GEOMETRY COORDINATES - ALT 1 |
| C28 | PAVEMENT GEOMETRY DETAILS |
| C29 | GRADING PLAN |
| C30 | GRADING PLAN |
| C30A | GRADING PLAN - ALT 1 |
| C31 | GRADING PROFILES |
| C32 | GRADING PROFILES |
| C33 | GRADING PROFILES |
| C34 | GRADING PROFILES |
| C35 | GRADING PROFILES |
| C36 | SPOT ELEVATION PLAN |
| C37 | SPOT ELEVATION PLAN |
| C37A | SPOT ELEVATION PLAN - ALT 1 |
| C38 | PAVEMENT MARKING PLAN |
| C39 | PAVEMENT MARKING PLAN |
| C39A | PAVEMENT MARKING PLAN - ALT 1 |
| C40 | PAVEMENT MARKING DETAILS |
| C41 | PAVEMENT MARKING COORDINATES |
| C41A | PAVEMENT MARKING COORDINATES - ALT 1 |
| S01 | BLAST FENCE |
| S02 | BLAST FENCE |
| G-1 | BORING LOCATION PLAN |
| G-2 | BORING LOGS |
| X-1 | TOPOGRAPHIC SURVEY |
| X-2 | TOPOGRAPHIC SURVEY |
| E01 | ELECTRICAL GENERAL NOTES |
| E02 | ELECTRICAL LEGEND AND NOTES |
| E03 | ELECTRICAL KEY MAP |
| E04 | ELECTRICAL DEMOLITION PLAN |
| E05 | ELECTRICAL DEMOLITION PLAN |
| E06 | ELECTRICAL LAYOUT PLAN |
| E07 | ELECTRICAL LAYOUT PLAN |
| E08 | ELECTRICAL CIRCUITRY PLAN |
| E09 | ELECTRICAL LAYOUT PLAN |
| E10 | ELECTRICAL DETAILS |
| E11 | ELECTRICAL DETAILS |
| E12 | ELECTRICAL DETAILS |
| E13 | ELECTRICAL DETAILS |
| E14 | ELECTRICAL DETAILS |
| E15 | ELECTRICAL DETAILS |
| E16 | ELECTRICAL DETAILS |
| E17 | ELECTRICAL DETAILS |
| E18 | ELECTRICAL DETAILS |



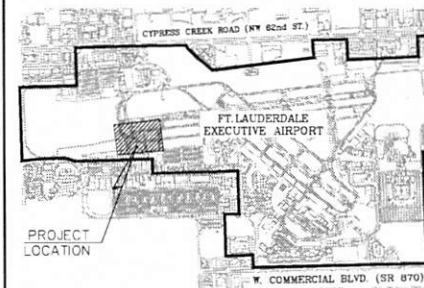
CITY OF FORT LAUDERDALE

RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS

FORT LAUDERDALE, FLORIDA



ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS
MAY HAVE REDUCED IN SIZE BY REPRODUCTION. THIS
MUST BE TAKEN INTO ACCOUNT WHEN OBTAINING SCALED
DATA.



LOCATION SKETCH

6000 NW 21st Avenue, Fort lauderdale, Florida



FORT LAUDERDALE CITY COMMISSION

| PROJECT MANAGER | JOB TITLE | PHONE NO. |
|--------------------------|-----------------------|----------------|
| KHANT MYAT P.E. | AIRPORT ENGINEER | (954) 828-5061 |
| THOMAS F. O'DONNELL P.E. | CIVIL ENGINEER | (561) 848-0825 |
| AMY CHAMPAGNE-BAKER P.E. | ELECTRICAL ENGINEER | (561) 210-9624 |
| JAMES D. STONER, P.S.M. | SURVEYOR | (561) 585-0997 |
| RAJ KRISHNASAMY, P.E. | GEOTECHNICAL SERVICES | (561) 687-8336 |

BID SET

GENERAL EROSION CONTROL NOTES

*1239

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LEGEND

- C14 - C15 EXISTING CONDITIONS
- C21 - C22 DEMOLITION PLANS
- C23 - C26 PAVEMENT GEOMETRY PLANS
- C29 - C30 GRADING PLANS
- C31 - C32 SPOT ELEVATION PLANS
- C33 - C37 PAVEMENT MARKING PLANS
- C38 - C39 PROJECT WORK AREA

Kimley-Horn
 100 North Andrews Avenue, Suite 200
 Fort Lauderdale, FL 33301
 Phone: 954.576.1100
 Fax: 954.576.1101
 Email: info@kimley-horn.com

QUANTUM
 100 North Andrews Avenue, Suite 200
 Fort Lauderdale, FL 33301
 Phone: 954.576.1100
 Fax: 954.576.1101
 Email: info@quantum.com

BID SET

| | |
|--|--------------------------|
| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS KEY MAP | SHEET NO. 03 TOTAL 74 |
|--|--------------------------|

| REVISIONS | | | | |
|-----------|------|----|------|-------------|
| NO. | DATE | BY | CHKD | DESCRIPTION |
| | | | | |
| | | | | |
| | | | | |

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | | | |
|--------------------|-------------------|--------------------|-------------------|
| DESIGNED BY HKS | CHECKED BY TFC | DATE 05/04/2022 | SCALE AS NOTED |
|--------------------|-------------------|--------------------|-------------------|

State of Florida
 Professional Engineer
 License No. 62478
THOMAS F. O'DONNELL

LEGEND



ACCESS / HAUL ROUTE

CONTRACTOR'S STAGING AND STORAGE AREA. MAXIMUM EQUIPMENT HEIGHT = 20'

PROJECT BOUNDARY AREA

TEMPORARY SECURITY FENCE. SEE SHEET C03.

RUNWAY SAFETY AREA

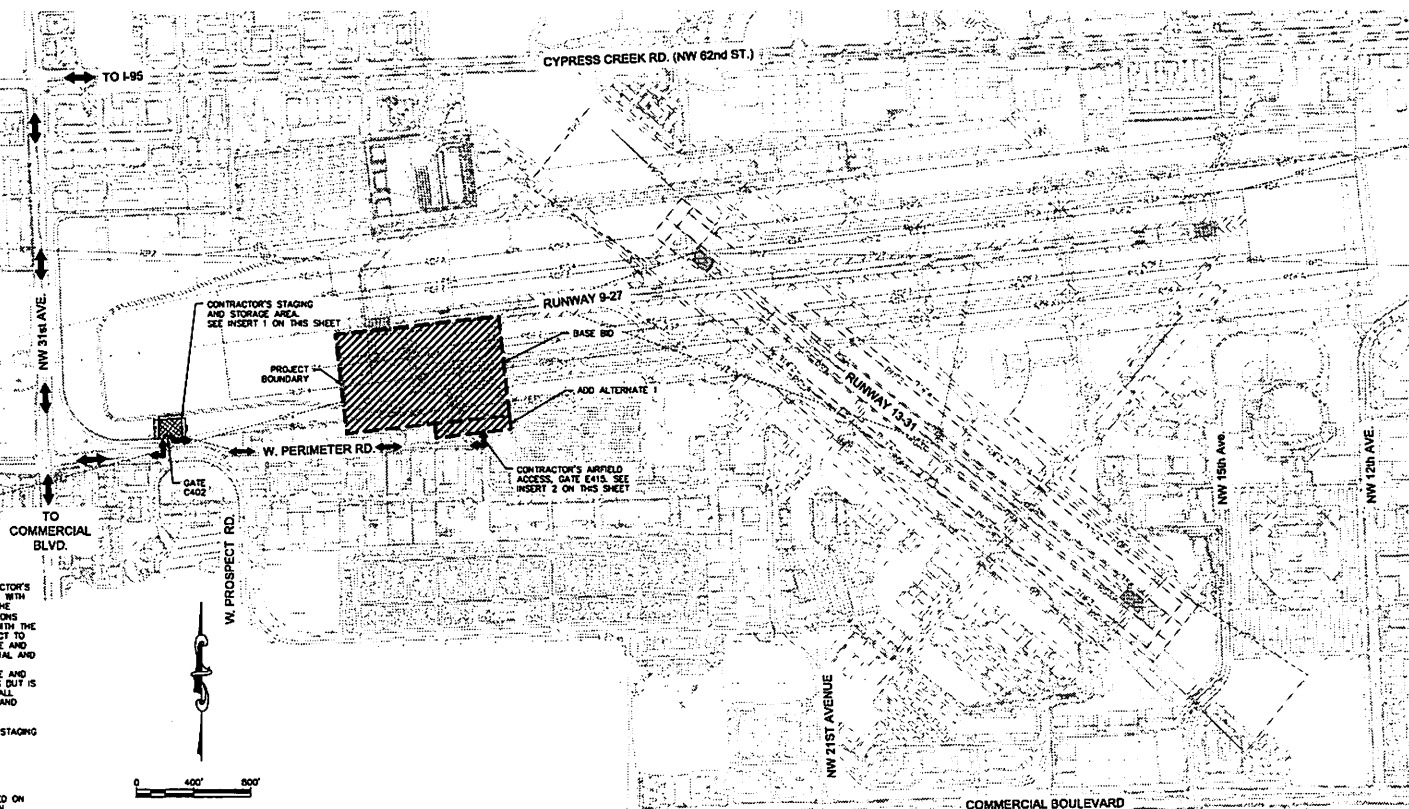
- ① STAGING AREA: CONTRACTOR'S STAGING AND STORAGE AREA. STAGING AREAS SHALL BE CONSTRUCTED AS TO AVOID ON/ADJACENT TAXIWAYS, BURROWS, EMPLOYEE VEHICLES SHALL NOT GO BEYOND CONTRACTOR'S FENCED STAGING AREA.
- ② CONTRACTOR'S ACCESS GATE: CONTRACTOR TO REMOVE EXISTING GATES PRIOR TO CONSTRUCTION. TEMPORARY GATES TO BE REMOVED AND ORIGINAL GATES RESTORED AFTER CONSTRUCTION IS COMPLETE. INSTALLATION AND REMOVAL OF TEMPORARY GATES ARE TO BE INCLUDED IN MOBILIZATION PAY ITEM.
- ③ CONTRACTOR'S SECURITY GUARD SHACK LOCATION.
- ⑤ CONSTRUCTION TRAFFIC SIGN

CONTRACTOR STAGING AREA NOTES:

1. THE EXACT LIMITS, LIGHTING AND SECURITY REQUIREMENTS OF THE CONTRACTOR'S STAGING AND STORAGE AREA SHALL BE ESTABLISHED BY THE CONTRACTOR WITH THE APPROVAL OF THE OWNER IN THE AREAS GENERALLY AS SHOWN ON THE PLANS. ANY AND ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S OPERATIONS SHALL BE ARRANGED FOR AND PAID FOR BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCIES. UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE CONTRACTOR SHALL USE THE STAGING AND STAGING AREA SHOWN ON THE PLANS FOR ITS FIELD OFFICE, SHOP, MATERIAL AND EQUIPMENT STORAGE, AND OTHER PROJECT RELATED ACTIVITIES, INCLUDING EMPLOYEE PARKING. ALL COSTS ASSOCIATED WITH PREPARING THE STAGING AND STAGING AREA SITE SHALL BE BORNE BY THE CONTRACTOR. THIS INCLUDES BUT IS NOT LIMITED TO, CLEARING AND GRADING OF THE SITE, CONSTRUCTION OF ALL TEMPORARY UTILITIES, ACCESS ROADS, ALL SECURITY FENCING, CLEAN-UP AND RESTORATION OF SITE TO ORIGINAL CONDITION.
2. CONSTRUCTION EQUIPMENT SHALL BE PARKED ONLY WITHIN CONTRACTOR'S STAGING AND STORAGE AREA OUTSIDE OF ESTABLISHED HOURS OF CONSTRUCTION.

ACCESS AND HAUL ROAD NOTES:

1. HAUL ROADS TO BE USED UNDER THIS PROJECT SHALL BE THOSE INDICATED ON THE DRAWINGS OR OTHERWISE SPECIFICALLY AUTHORIZED BY THE OWNER. IN GENERAL, THE CONTRACTOR SHALL CONFINED EQUIPMENT AND HAULING TO THE AREAS UNDER CONSTRUCTION. NO DEBRIS SHALL BE ALLOWED ON THE ROADWAYS OR AIRPORT PAVED SURFACES. ACTIVE TAXIWAYS SHALL BE KEPT FREE OF DEBRIS AT ALL TIMES. CONTRACTOR SHALL MAINTAIN VACUUM SWEEPERS ON SITE FOR THAT USE. OTHER PAVEMENTS SHALL BE KEPT BY THE CONTRACTOR DAILY AND AS REQUIRED, USING VACUUM SWEEPERS TO KEEP ALL ACCESS AND CONSTRUCTION AREAS CLEAR OF SOILS, OILS OR OTHER DEBRIS.
2. THE ACCESS POINTS TO THE PROJECT SITE ARE SHOWN ON THE PLANS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AIRPORT SERVICE ROADS TO THEIR PRECONSTRUCTION CONDITION WHERE SUCH ROADS ARE USED BY THE CONTRACTOR FOR HAULING OPERATIONS.
4. THE CONTRACTOR SHALL RESTORE ALL TURFED AND PAVED AREAS USED FOR HAUL ROADS TO THEIR ORIGINAL CONDITION, INCLUDING THE ESTABLISHMENT OF TURF. ALL COSTS FOR CONSTRUCTING, REMOVING AND RESTORING OF HAUL ROADS REQUIRED FOR THE COMPLETION OF THE WORK SHALL BE BORNE BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE CLEAN-UP OF ANY DEBRIS DEPOSITED AT THE PROJECT SITE AND ALONG ANY ROAD AS A RESULT OF HIS/HER CONSTRUCTION TRAFFIC. DIRECTIONAL SIGNAGE AT THE ACCESS GATE AND ALONG THE DELIVERY ROUTE TO THE STORAGE AREA OR WORK SITE SHALL BE APPROVED BY THE OWNER. ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE SITE SHALL BE DIRECTED TO THE ACCESS POINTS IDENTIFIED.
6. ON EXISTING AIRPORT PAYMENTS TO REMAIN, ONLY RUBBER TIRE VEHICLES SHALL BE PERMITTED.
7. THE CONTRACTOR, THROUGH THE CONTRACTOR SECURITY OFFICER, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. VEHICLES ON THE LIST SHALL BE ASSIGNED IN ACCORDANCE WITH AIRPORT SECURITY PROCEDURES.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE.
9. ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION AREAS, STAGING AREAS OR HAUL ROUTES.



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TO COMMERCIAL BLVD.

TO I-95

NW 31st AVE

W. PERIMETER RD.

W. PROSPECT RD.

NW 21st AVENUE

NW 15th AVE

NW 12th AVE

COMMERCIAL BOULEVARD

CYPRESS CREEK RD. (NW 62nd ST.)

BASE RD

ADD ALTERNATE

CONTRACTOR'S AIRFIELD ACCESS, GATE E415. SEE INSERT 2 ON THIS SHEET

PROJECT BOUNDARY

CONTRACTOR'S STAGING AND STORAGE AREA. SEE INSERT 1 ON THIS SHEET

GATE C402

TO I-95

TO COMMERCIAL BLVD.

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CONTRACTOR'S AIRFIELD ACCESS, GATE E415. SEE INSERT 2 ON THIS SHEET

PROJECT BOUNDARY

CONTRACTOR'S STAGING AND STORAGE AREA. SEE INSERT 1 ON THIS SHEET

GATE C402

TO I-95

TO COMMERCIAL BLVD.

NW 31st AVE

W. PERIMETER RD.

W. PROSPECT RD.

NW 21st AVENUE

NW 15th AVE

NW 12th AVE

COMMERCIAL BOULEVARD

CYPRESS CREEK RD. (NW 62nd ST.)

BASE RD

ADD ALTERNATE

CONTRACTOR'S AIRFIELD ACCESS, GATE E415. SEE INSERT 2 ON THIS SHEET

PROJECT BOUNDARY

CONTRACTOR'S STAGING AND STORAGE AREA. SEE INSERT 1 ON THIS SHEET

GATE C402

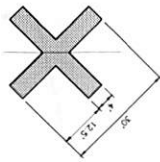
TO I-95

TO COMMERCIAL BLVD.

NW 31st AVE

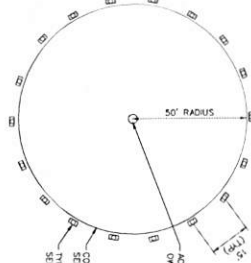
CONSTRUCTION SAFETY NOTES

1. ALL CONSTRUCTION FOR THIS PROJECT SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS AND AIRPORTS, AND THESE PLANS AND SPECIFICATIONS.
2. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN THE RUNWAY SAFETY AREA (RSA) OF ANY RUNWAY THAT IS OPEN FOR AIRCRAFT OPERATIONS (SEE SECTION 2.22.4C, 150/570-20, CHAPTER 2).
3. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN TANKWAY SAFETY AREA (TSA) OF AN AIRCRAFT TAXIWAY OR TANKWAY. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN THE TANKWAY SAFETY AREA (TSA) OF ANY TANKWAY THAT IS OPEN FOR AIRCRAFT OPERATIONS (SEE SECTION 2.22.4C, 150/570-20, CHAPTER 2).
4. NO CONSTRUCTION TRAFFIC SHALL ENTER OR CROSS ANY ACTIVE AIRPORT OPERATIONAL AREA EXCEPT UPON AUTHORIZATION BY THE OWNER. THIS SPECIFICALLY INCLUDES THE TANKWAY SAFETY AREA (TSA) OF ANY TANKWAY THAT IS OPEN FOR AIRCRAFT OPERATIONS. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE TANKWAY SAFETY AREA (TSA) OF ANY TANKWAY THAT IS OPEN FOR AIRCRAFT OPERATIONS.
5. NO CONSTRUCTION TRAFFIC SHALL ENTER OR CROSS ANY LOCALIZER OR GLIDE SLOPE CRITICAL AREA EXCEPT UPON AUTHORIZATION BY THE OWNER.
6. IN ORDER FOR THE CONSTRUCTION TO PROCEED WITHIN THE AIR OPERATIONS AREA, APPROPRIATE NOTICES TO AIRMAN (NOTAMS) MUST BE ISSUED BY THE OWNER THROUGH THE AIRPORT OPERATIONS AREA. THE NOTAMS MUST BE ISSUED IN ACCORDANCE WITH THE AIRPORT OPERATIONS AREA. THE NOTAMS MUST BE ISSUED IN ACCORDANCE WITH THE AIRPORT OPERATIONS AREA.
7. APPROVED OPERATIONS SHALL AT ALL TIMES HAVE PROPERLY OPERATIONAL NOTAMS. APPROVED OPERATIONS SHALL AT ALL TIMES HAVE PROPERLY OPERATIONAL NOTAMS. APPROVED OPERATIONS SHALL AT ALL TIMES HAVE PROPERLY OPERATIONAL NOTAMS.
8. ALL CONSTRUCTION VEHICLES, INCLUDING TRAILING TRUCKS, THAT ARE AUTHORIZED TO OPERATE WITHIN THE SECURITY FENCE ON THE AIRPORT MUST BE EQUIPPED WITH A RED FLASHING LIGHTS ON THE VEHICLE. A 3x3' OR LARGER ORANGE AND WHITE CHECKERBOARD FLAG MUST BE DISPLAYED ON THE VEHICLE. A 3x3' OR LARGER ORANGE AND WHITE CHECKERBOARD FLAG MUST BE DISPLAYED ON THE VEHICLE.
9. CONSTRUCTION SHALL CONTRIBUTE TO THE ON-AIRPORT MOVEMENT AND ACTIVITIES OF ITS EMPLOYEES AND SUBCONTRACTORS.
10. CONSTRUCTION SHALL CONTRIBUTE TO THE ON-AIRPORT MOVEMENT AND ACTIVITIES OF ITS EMPLOYEES AND SUBCONTRACTORS.

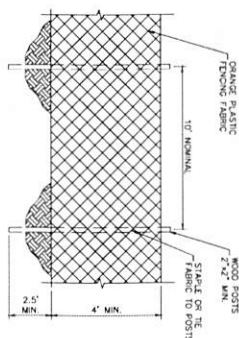


1. TEMPORARY CLOSED TANKWAY MARKER SHALL BE CONSTRUCTED OF AN EASY-TO-REMOVE MATERIAL, SUCH AS PLASTIC OR FABRIC, AND BE YELLOW IN COLOR.
2. THE CONSTRUCTION SHALL PLACE THE TEMPORARY CLOSED TANKWAY MARKER ON THE TANKWAY MARKER AS SHOWN ON THE PLAN.
3. NO PARKING SHALL BE MADE FOR ANY VEHICLE OR EQUIPMENT ON THE TANKWAY MARKER.
4. PARKING FOR ITV IS INCLUDED IN THE MARKING PLAN FOR THIS PROJECT.

TEMPORARY TANKWAY CLOSURE MARKER



BURROWING OWL FENCE PROTECTION DETAIL



CONSTRUCTION FENCE DETAIL

NOTES

1. THE CONTRACTOR SHALL PROVIDE FULLY FUNCTIONING PORTABLE LIGHTED RUNWAY CLOSURE MARKERS FOR THE PROJECT.
2. THE RULE AND MAINTENANCE COSTS ASSOCIATED WITH USING THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS SHALL BE INCLUDED IN THE BIDDING PRICE FOR THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS.
3. THE CONTRACTOR SHALL CLEAN, REPAIR AND REPLACE ANY DAMAGED PAINTS ON THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS.

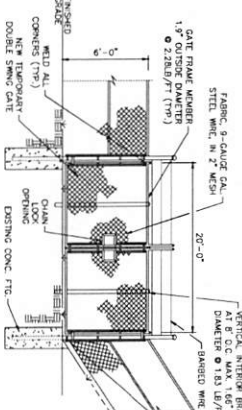
CONTRACTOR-FURNISHED PORTABLE LIGHTED RUNWAY CLOSURE MARKER



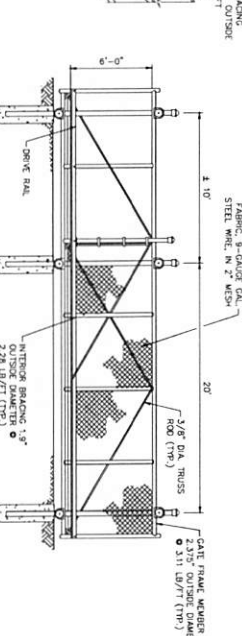
LOW LEVEL AIRFIELD BARRICADE DETAIL & NOTES



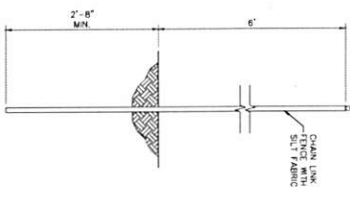
1. BARRICADES SHALL BE PLACED AS SHOWN ON THE PLANNING PLANS TO PROTECT THE CONSTRUCTION WORK AREAS. EXACT BARRICADE LOCATION AND QUANTITY TO BE DETERMINED BY THE CONTRACTOR.
2. BARRICADES SHALL BE PLACED AS SHOWN ON THE PLANNING PLANS TO PROTECT THE CONSTRUCTION WORK AREAS. EXACT BARRICADE LOCATION AND QUANTITY TO BE DETERMINED BY THE CONTRACTOR.
3. A BARRICADE SHALL BE CONSIDERED VISIBLE FOR NIGHT OR WEATHER AND SHALL BE PLACED AS SHOWN ON THE PLANNING PLANS TO PROTECT THE CONSTRUCTION WORK AREAS. EXACT BARRICADE LOCATION AND QUANTITY TO BE DETERMINED BY THE CONTRACTOR.
4. BARRICADES SHALL BE CONSIDERED VISIBLE FOR NIGHT OR WEATHER AND SHALL BE PLACED AS SHOWN ON THE PLANNING PLANS TO PROTECT THE CONSTRUCTION WORK AREAS. EXACT BARRICADE LOCATION AND QUANTITY TO BE DETERMINED BY THE CONTRACTOR.
5. ALTERNATE FORMS OF BARRICADES MAY BE PROPOSED BY THE CONTRACTOR WHICH MEET THESE FUNCTIONAL REQUIREMENTS. APPROVALS OF ANY SUCH SUBSTITUTION (IF GRANTED) SHALL BE BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. THE FINAL LOCATION FOR THE BARRICADES SHALL BE ESTABLISHED IN THE FIELD WITH CONFORMANCE FROM THE OWNER.
7. THE CONTRACTOR SHALL MAINTAIN THE BARRICADES IN GOOD CONDITION AND REMOVE ALL BARRICADES FROM THE SITE WHEN THE CONSTRUCTION IS COMPLETED.
8. THE CONTRACTOR SHALL MAINTAIN THE BARRICADES IN GOOD CONDITION AND REMOVE ALL BARRICADES FROM THE SITE WHEN THE CONSTRUCTION IS COMPLETED.
9. FLASHING LIGHTS SHALL BE PLACED AT THE ENDS AND AT CORNERS OF EACH LINE OF BARRICADES. ALL OTHER LIGHTS ON BARRICADES SHALL BE STEADY-BURN.



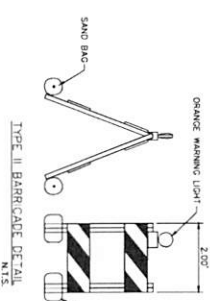
TEMPORARY SECURITY DOUBLE SWING GATE



TEMPORARY SLIDE GATE DETAIL



TEMPORARY SECURITY FENCE DETAIL



TYPE II BARRICADE DETAIL

Quantum

CALL 48 HOURS BEFORE DOING THE LAW

CALL 48 HOURS BEFORE DOING THE LAW

CALL 48 HOURS BEFORE DOING THE LAW

BID SET

PROJECT # 12708

RUNWAY 9 RUN-UP AREA AND

TW INTERSECTION IMPROVEMENTS

SAFETY NOTES AND DETAILS

| NO. | DATE | BY | CHKD | DESCRIPTION |
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CITY OF FORT LAUDERDALE

PUBLIC WORKS DEPARTMENT

ENGINEERING & ARCHITECTURE

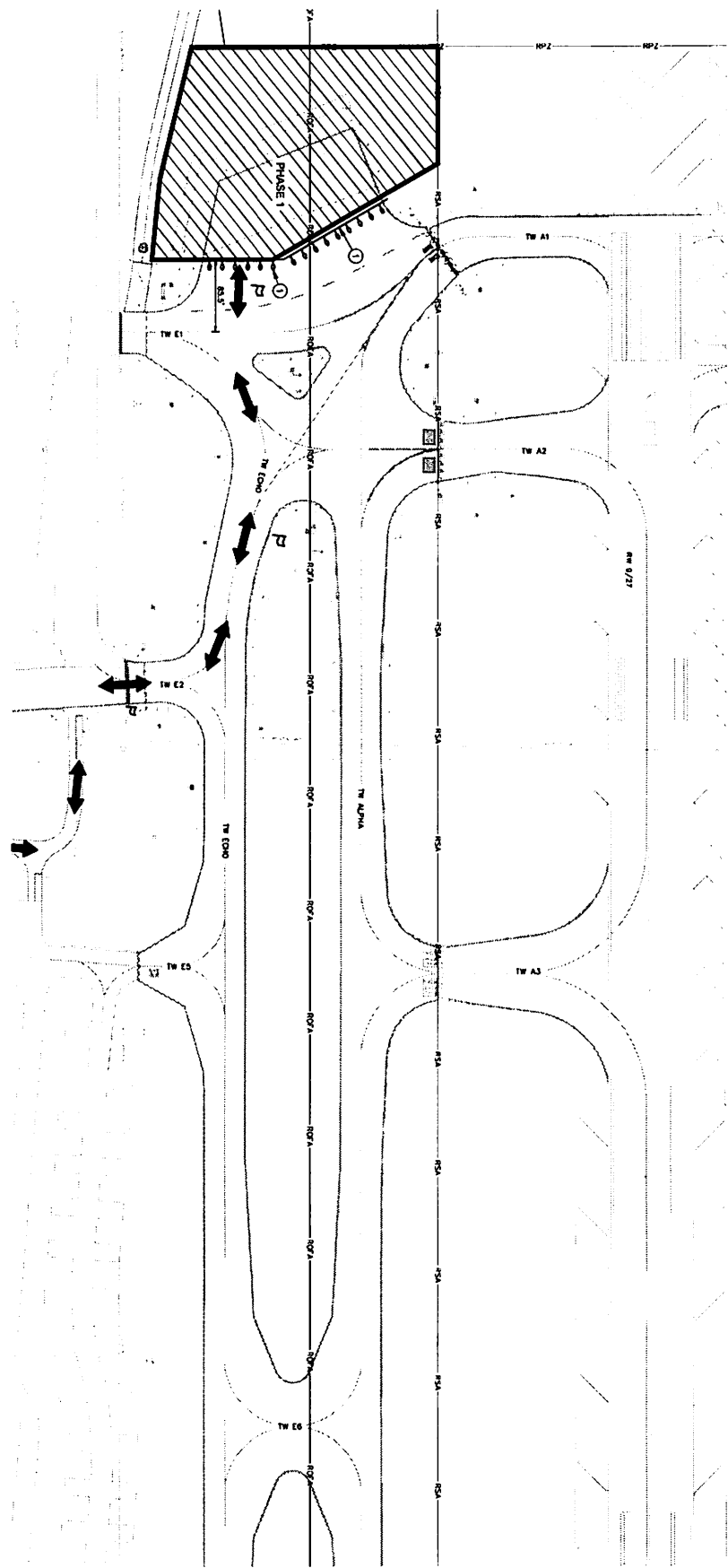
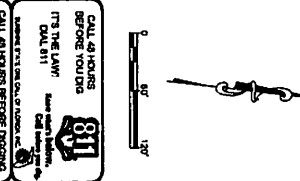
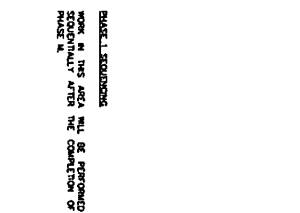
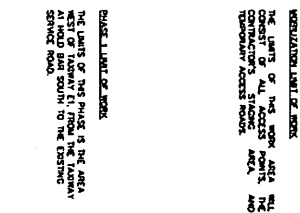
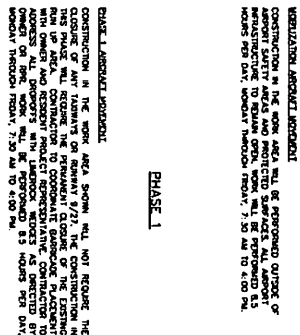
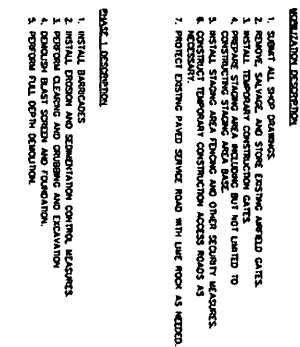
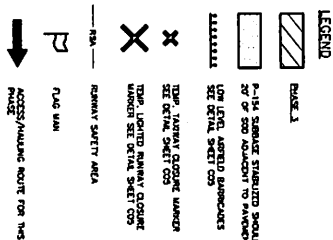
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

State of Florida

Professional Engineer

License No. 67478

THOMAS F. O'DONNELL



BID SET

| | |
|---|---|
| SHEET NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">C06</div> OF | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PHASING PLAN 1 |
| TOTAL 74 | |
| C&G FILE C&G - ONE DRAWING FILE NO. 4-1-13-60 | |

[illegible]

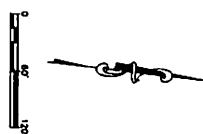
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
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| DRAWN BY: ALB | DATE: 05/04/2022 |
| DESIGNED BY: HAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK: | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL



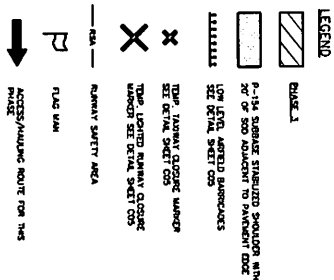


THOMAS F.
O'DONNELL



State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

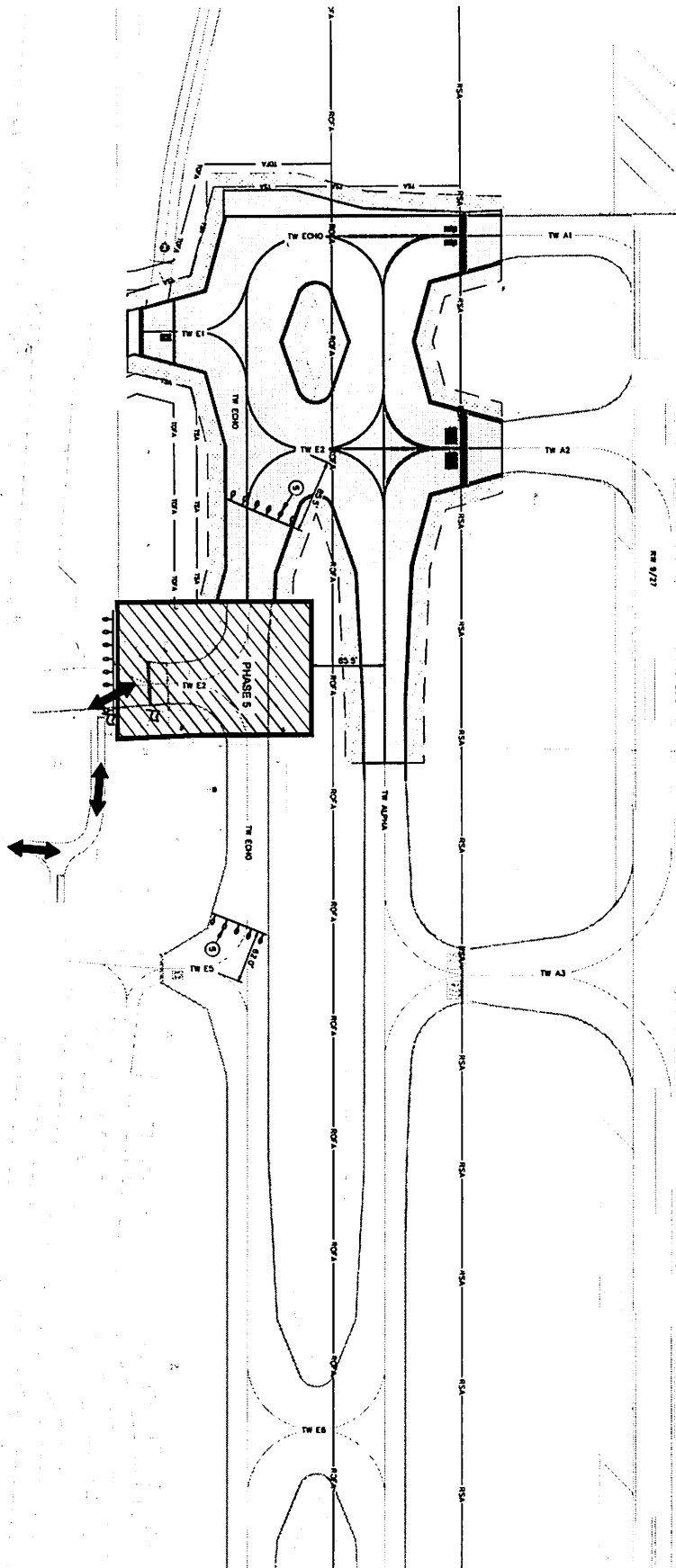


1. INITIAL BASOPHILS
2. INITIAL PROTON AND SEDIMENTATION COUNTING, WASTEWATER
3. INITIAL OILWATER AND CRIBBING AND EVALUATION
4. INITIAL DECONTAMINATION SUBJECTS AND LANDFILL
5. INITIAL PAVEMENT RELINING AND ROOFING TRANSITION METHOD
6. INITIAL ASPHALT REPAIRS AND SCRAPER REPAIRS LANDFILL
7. INITIAL ASPHALT OVERLAY
8. INITIAL STABILIZED SHOULDER
9. INITIAL ELECTRICAL DECONTAMINATION AND INSTALLATION
10. INITIAL PROTON, SOI AND HYDROSOI
11. INITIAL THERMOGRAPHY MONITORING

- CHAS. S. ANGELO, MANAGER:**
CONSTRUCTION IN THE PAST SEVEN WEEKS BECAUSE THE CLOSURE OF THE DISTRICT TUNNEL AND A PORTION OF THE I-90 TUNNEL. EMPLOYEES RANNEY 15-31 AND DISTRICT MANAGER ED (ED) HEDDO HAS WORKING AREA), TRAINING A. A. 42, A. 51, AND 53 ARE TO REMAIN OPEN. CONTRACTORS TO COORDINATE BARROCO, CLOAK AND PLANT WITH APPROPRIATE STAFF AND RESIDENT PROJECT REPRESENTATIVE. CONTRACTOR TO ADDRESS ALL EMPLOYEES WITH EMPLOYEE ADDRESS AS DIRECTED BY OPERATOR OR OWNER. WORK WILL BE PERFORMED 6.5 HOURS PER DAY. ROADWORK FROM 7:30 AM TO 6:00 PM.

- PHASE 3. LIMIT OF WORK
- THE LIMITS OF THIS PHASE ARE THE AREA AROUND TADWAY E2 AND THE PORTION OF TADWAY ECHO NORTH OF TW E2.

- PHASE 3 SEQUENCING
- WORK IN THIS PHASE WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 4 AND 4A.



BID SET

| | | |
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| PROJECT NO. | 74 | PROJECT # 12708 |
| CAD FILE | | RUNWAY 9 RUN-UP AREA AND |
| 12708-C10-PNS | | TW INTERSECTION IMPROVEMENTS |
| DRAWING FILE NO. | | PHASING PLAN 5 |
| 4-14-00 | | |

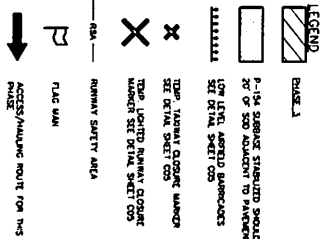
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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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| DRAWN BY: ALB | DATE: 05/04/2022 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK: | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL



- PHASE 1 DESCRIPTION**
1. INSTALL BARRELS
 2. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES
 3. PERFORM GRADING AND DRAINAGE AND EXCAVATION
 4. INSTALL EXISTING SURFACE AND LANDSCAPE
 5. PERFORM PAVEMENT RECONSTRUCTION FOR SERVICE ROAD
 6. CONDUCT ASPHALT PAVING
 7. PERFORM ELECTRICAL EXCAVATION AND INSTALLATION
 8. PERFORM ELECTRICAL EXCAVATION AND INSTALLATION
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 10. PERFORM ELECTRICAL EXCAVATION AND INSTALLATION
 11. PERFORM ELECTRICAL EXCAVATION AND INSTALLATION
 12. PERFORM ELECTRICAL EXCAVATION AND INSTALLATION

- PHASE 1, AIRPORT MODERNIZATION**
1. PERFORM GRADING AND DRAINAGE AND EXCAVATION
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 3. PERFORM GRADING AND DRAINAGE AND EXCAVATION
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- PHASE 1, LIMIT OF WORK**
1. PERFORM GRADING AND DRAINAGE AND EXCAVATION
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 12. PERFORM GRADING AND DRAINAGE AND EXCAVATION

- PHASE 1, SECTIONS**
1. PERFORM GRADING AND DRAINAGE AND EXCAVATION
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 12. PERFORM GRADING AND DRAINAGE AND EXCAVATION

QUANTUM

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CALL 48 HOURS BEFORE DOING ITS THE LAW

BID SET

PROJECT # 12708

RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PHASING PLAN 6

C11

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CITY OF FORT LAUDERDALE

PUBLIC WORKS DEPARTMENT

ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGN BY: ALE

DATE: 05/04/2023

REVISIONS BY: ALE

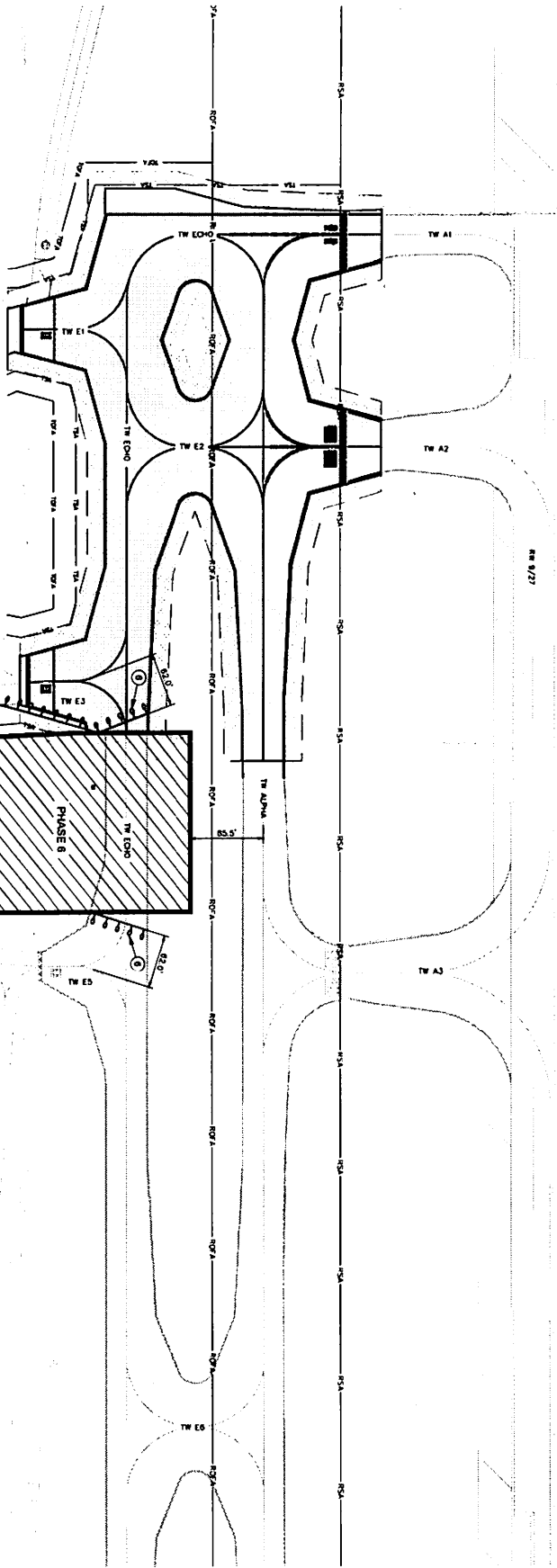
SCALE: AS NOTED

CHECKED BY: TFO

FIELD BOOK:

State of Florida
Professional Engineer
License No. 63478

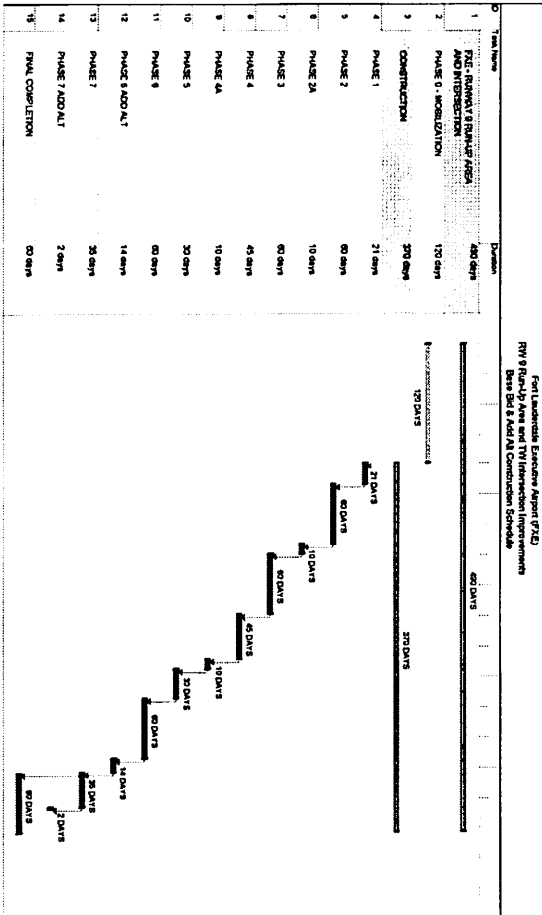
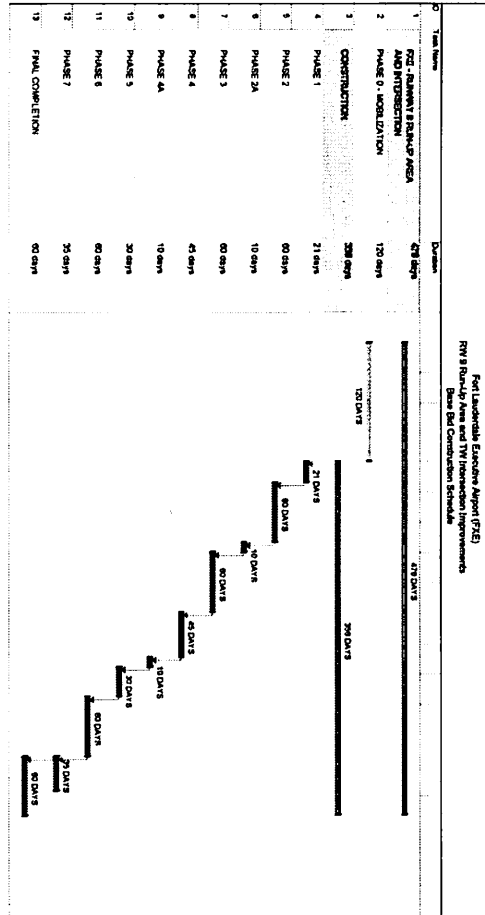
THOMAS F. O'DONNELL





State of Florida
Professional Engineer
License No. 62478

THOMAS F.
ODONNELL

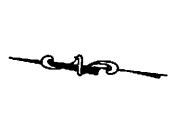


Quantity
CALL 48 HOURS BEFORE FILING ITS THE LAW
DIAL 811
CALL 800-451-7272
CALL 954-396-7212
FPA FACILITIES 954-396-7212

QUANTITY
CALL 48 HOURS BEFORE FILING ITS THE LAW
DIAL 811
CALL 800-451-7272
CALL 954-396-7212
FPA FACILITIES 954-396-7212

BID SET

| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PHASING SCHEDULE | REVISIONS <table border="1"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHK'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | NO | DATE | BY | CHK'D | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING & ARCHITECTURE 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | DRAWN BY: ALD CHECKED BY: KAS DATE: 05/04/2022 SCALE: AS NOTED FIELD BOOK | State of Florida Professional Engineer License No. 62478 THOMAS F. O'DONNELL |
|---|--|----|-------|-------------|-------|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|
| NO | DATE | BY | CHK'D | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | |
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1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO OBTAIN ADDITIONAL INFORMATION AS REQUIRED BY LAW. SEE CHURCH NOTES FOR INFORMATION ON THE LOCATION OF THE UNDERGROUND UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY INFORMATION FROM THE CITY OF PORTLAND AND THE PORTLAND WATER BUREAU. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY INFORMATION FROM THE CITY OF PORTLAND AND THE PORTLAND WATER BUREAU. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY INFORMATION FROM THE CITY OF PORTLAND AND THE PORTLAND WATER BUREAU.
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| EXISTING CONTOUR | B.C.R. _____ | BROWARD COUNTY RECORDS |
| AIRPORT SIGN ON CONCRETE PAD | CBS _____ | CALIFORNIA BEARING RATIO |
| | CONC. _____ | CONCRETE |
| | CONC. _____ | ELEVATION |
| | FL. _____ | |
| CORE LOCATION | # _____ | IRON ROD |
| | LB _____ | LOCKED BUSINESS |
| RAILWAY LIGHT | N/A _____ | NOT APPLICABLE |
| | N/A _____ | NAIL IN DCC |
| ELECTRIC BOXES | S/A _____ | STONER & ASSOCIATES, INC |
| | TRANS. PT. _____ | TRANSVERSE POINT |

BDO-MARK


 SPOT ELEVATION

| | |
|-----------|--------------------------|
| ISA _____ | RUMBLE SAFETY AREA |
| TSA _____ | REBOUND OBJECT FREE AREA |
| RPE _____ | RUMBLE PROTECTION ZONE |
| ISA _____ | RUMBLE SAFETY AREA |
| TSA _____ | REBOUND OBJECT FREE |

**CALL 48 HOURS
BEFORE YOU DIG**

IT'S THE LAW!

DIAL 811



Know what's below.
Call before you dig.

Number 811 is one call of Florida, Inc.

BID SET

PROJECT # 12103
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
EXISTING CONDITIONS



ALL SHEET CHG

- ## LEGEND

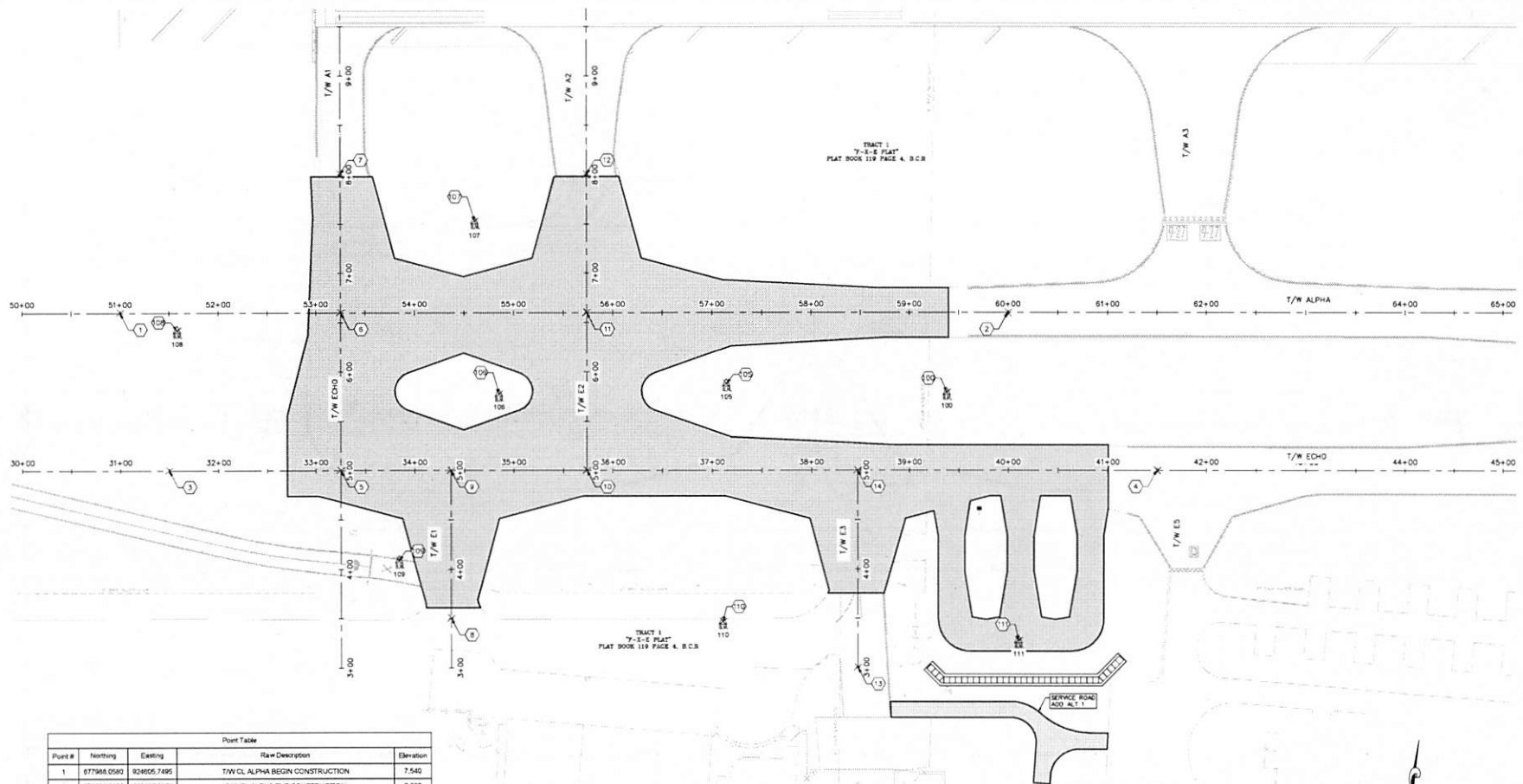
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**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
EXISTING CONDITIONS**

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

THOMAS F.
CYDONELLI



| Point # | Northing | Easting | Raw Description | Elevation |
|---------|-------------|-------------|---|-----------|
| 1 | 677968.0560 | 924605.7495 | TW CL ALPHA BEGIN CONSTRUCTION | 7.540 |
| 2 | 678091.2069 | 925499.8121 | TW CL ALPHA END CONSTRUCTION | 9.000 |
| 3 | 677834.8473 | 924673.7979 | TW CL ECHO BEGIN CONSTRUCTION | 6.470 |
| 4 | 677949.5240 | 925067.1708 | TW CL ECHO END CONSTRUCTION | 9.000 |
| 5 | 677854.8237 | 924847.5827 | TW CL ALPHA 2 INTERSECTION TW CL ECHO INTERSECTION | 7.720 |
| 6 | 678013.8962 | 924629.3345 | TW CL ALPHA 1 INTERSECTION TW CL ALPHA INTERSECTION | 8.430 |
| 7 | 678152.8448 | 924813.2787 | TW CL ALPHA 2 END CONSTRUCTION | 10.200 |
| 8 | 677718.5918 | 924975.5793 | TW CL ECHO 1 BEGIN CONSTRUCTION | 7.960 |
| 9 | 677867.7022 | 924958.3779 | TW CL ECHO 1 END TW CL ECHO INTERSECTION | 8.330 |
| 10 | 677883.4702 | 925064.9708 | TW CL ALPHA 2 BEGIN TW CL ECHO INTERSECTION | 7.120 |
| 11 | 678042.4147 | 925076.8225 | TW CL ALPHA 2 INTERSECTION TW CL ALPHA INTERSECTION | 9.150 |
| 12 | 678181.4911 | 925092.5678 | TW CL ALPHA 2 END CONSTRUCTION | 10.200 |
| 13 | 677716.0364 | 923368.1051 | CL TW ECHO 2 BEGIN CONSTRUCTION | 9.000 |
| 14 | 677914.7789 | 925395.1997 | TW CL ECHO 2 END TW CL ECHO INTERSECTION | 7.480 |
| 100 | 678023.7428 | 925447.5095 | BM 100 | 8.110 |
| 105 | 677986.7735 | 925224.2817 | BM 105 | 7.710 |
| 106 | 677950.3958 | 924997.8999 | BM 106 | 8.060 |
| 107 | 678121.5920 | 924953.6193 | BM 107 | 8.180 |
| 108 | 677978.9887 | 924895.8203 | BM 108 | 8.860 |
| 109 | 677771.1584 | 924915.9987 | BM 109 | 7.060 |
| 110 | 677749.9561 | 925248.1444 | BM 110 | 7.548 |
| 111 | 677791.9538 | 925547.2494 | BM 111 | 7.840 |

LEGEND



CONTROL POINT NUMBER



PROJECT PAVEMENT LIMITS

NOTE:

- DRAWING BASED ON SURVEY PREPARED BY STONER AND ASSOCIATES, INC. DATE: JANUARY 21, 2022.
- THE HORIZONTAL COORDINATES SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE), NORTH AMERICAN DATUM 1983/1990 ADJUSTMENT (N.A.D. 83/90). THE COORDINATES FOR EACH CONTROL POINT WERE ESTABLISHED BY UTILIZING A COMBINATION OF GPS OBSERVATIONS AND/OR CONVENTIONAL SURVEY MEASUREMENTS. THIS SURVEY IS RELATIVE TO SAID SPECIAL PURPOSE SURVEY, CITY PROJECT NO. 1115. THE FOLLOWING MONUMENTS WERE UTILIZED AS THE BASIS OF THE COORDINATES FOR SAID R/W & T/W SURVEY, AND ARE DESCRIBED AS FOLLOWS: 4"X4" CONCRETE MONUMENT WITH DISK STAMPED "JRM" FOUND AT THE NORTHWEST END OF RUNWAY 13-31 AND A IR NAIL AND DISK STAMPED "7-1" GPS CITY OF FT. LAUDERDALE FOUND AT THE SOUTHEAST END OF RUNWAY 13-31. THE COORDINATE VALUES ARE: NORTHING: 675948.570, EASTING: 920729.881 AND NORTHING: 679299.723, EASTING: 925503.817, RESPECTIVELY, AS PROVIDED BY THE CITY OF FORT LAUDERDALE AND NOTED IN SAID SURVEY.
- THE ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88) ESTABLISHED FROM CITY OF FORT LAUDERDALE BENCHMARKS: NW 965 A MAG NAIL IN BRASS DISC STAMPED CITY OF FT LAUD BM NW 965 ON SOUTH SIDE EDGE OF PAVEMENT OF NW 55 COURT, 380' +/- WEST OF CENTER LINE OF NW 23 AVENUE, ELEVATION= 8.436', AND NW 968, A MAG NAIL IN BRASS DISC STAMPED CITY OF FT LAUD BM NW 968 ON NORTHEAST SIDE EDGE OF PAVEMENT OF NW 56 STREET, 308' +/- NORTH OF CENTER LINE OF NW 55 COURT, ELEVATION= 7.764'. THE EXPECTED VERTICAL ACCURACY OF THE ELEVATIONS SHOWN HEREON IS ±0.03' FOR HARD SURFACES AND ±0.1' FOR SOFT SURFACES.
- PRIOR TO ANY DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL CONTROL POINTS. ANY DISCREPANCIES WILL BE IMMEDIATELY REPORTED TO THE RPR AND ENGINEER.

DATUM:

VERTICAL ELEVATIONS ARE REFERENCED TO THE NAVD OF 1988
HORIZONTAL LOCATIONS ARE REFERENCED TO THE NAD OF 83/90

0 50' 100'

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DIAL 811Have others Digging?
Call before you dig.SUNSHINE STATE ONE CALL OF FLORIDA, INC.
CALL 48 HOURS BEFORE DIGGING
FAA FACILITIES 954-356-7212

Kimley-Horn
Kimley-Horn and Associates, Inc.
Civil/Environmental Engineers/Planners
1000 N.W. 10th Avenue, Suite 1000
Fort Lauderdale, FL 33311
(954) 574-1000

QUANTUM
Civil/Environmental Engineers/Planners
1000 N.W. 10th Avenue, Suite 1000
Fort Lauderdale, FL 33311
(954) 574-1000

State of Florida
Professional Engineer
License No. 62478

DATE: 05/04/2022
DESIGNED BY: ALB
CHECKED BY: KAS
IN CHARGE: JFO
FIELD BOOK: 33301

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
PROJECT LAYOUT - SURVEY CONTROL PLAN

SHEET NO. 38 OF 38
C16
TOTAL: 38
CAD FILE: 12708-C16-CTRL
DRAWING FILE NO: 4-143-40

BID SET

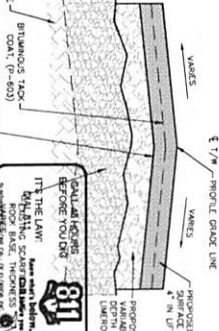
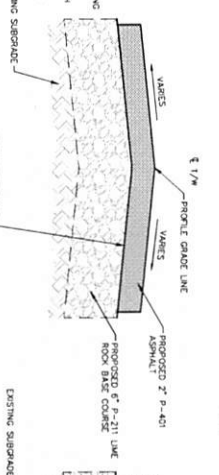
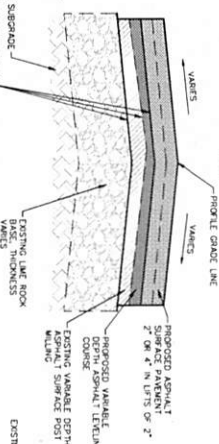
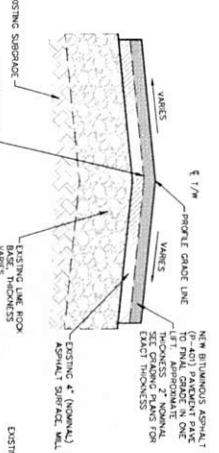
TYPICAL SECTION NO. 5 - 2" MILL AND 2" OVERLAY

TYPICAL SECTION NO. 6 - 2" MILL AND 2" OR 4" OVERLAY WITH VARIABLE DEPTH LEVELING COURSE

TYPICAL SECTION NO. 7 - FULL DEPTH SERVICE ROAD CONSTRUCTION

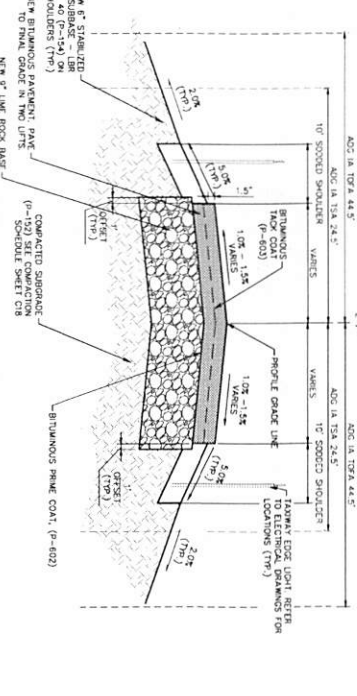
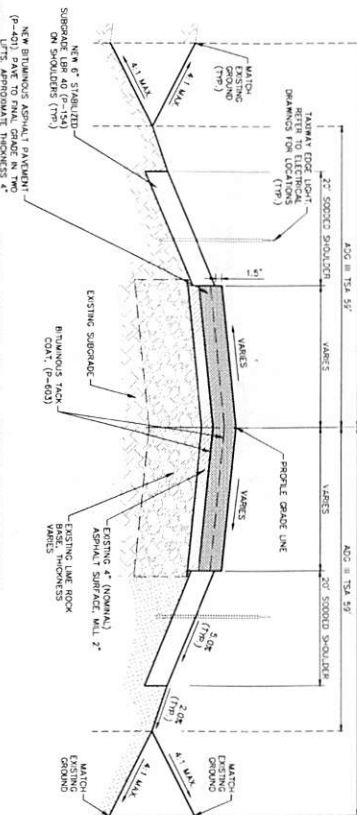
TYPICAL SECTION NO. 8 - VARIABLE DEPTH LIME ROCK OVER EXISTING QUANTUM

BID SET



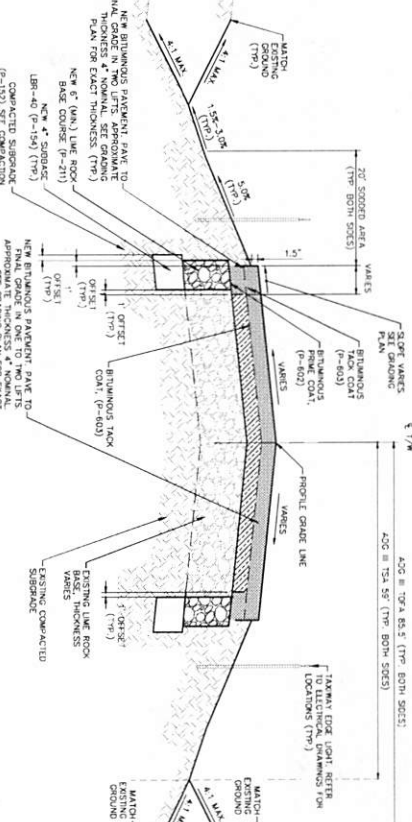
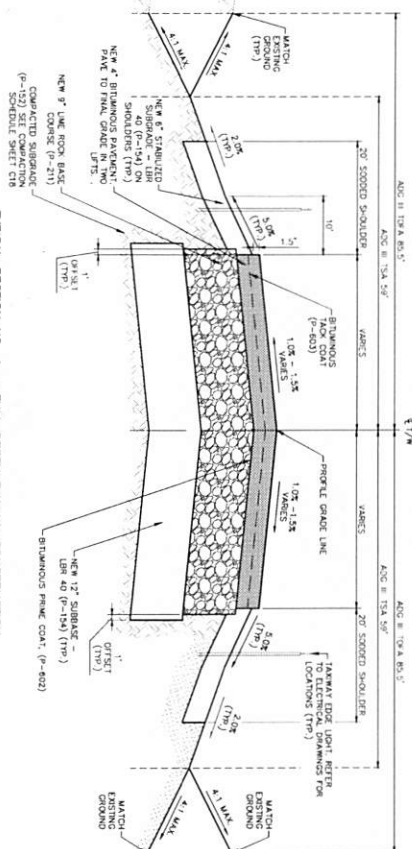
TYPICAL SECTION NO. 3 - 2" MILL AND 4" OVERLAY

TYPICAL SECTION NO. 6 - FULL DEPTH RUN-UP AREA CONSTRUCTION



TYPICAL SECTION NO. 1 - FULL DEPTH TAXWAY CONSTRUCTION

TYPICAL SECTION NO. 2 - NEW PAVEMENT ADJACENT TO MILL AND OVERLAY



PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
TYPICAL SECTIONS

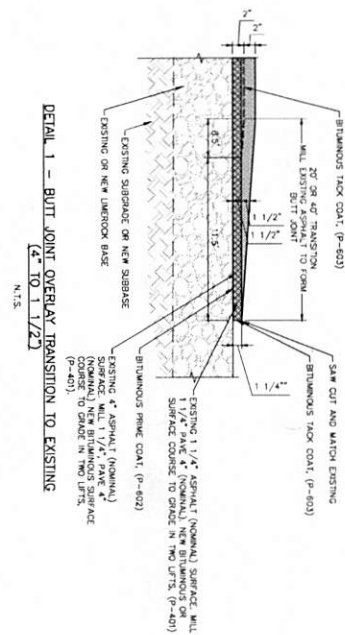
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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

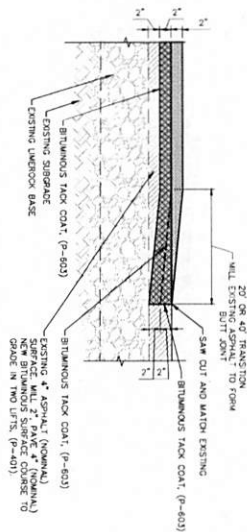
DRAWN BY: DATE: 05/04/2022
BY: SCALE: AS NOTED
CHECKED BY: TFC
FIELD BOOK

State of Florida
Professional Engineer
License No. 62478
THOMAS F. O'DONNELL

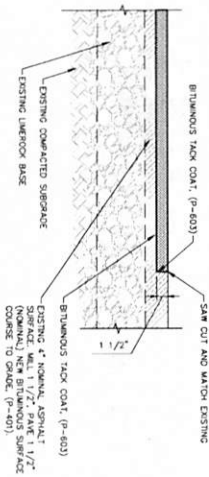
SHEET NO. 38
TOTAL 38
C17
DRAWING FILE NO. 4-143-40



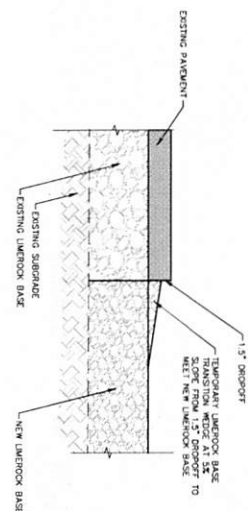
DETAIL 1 - BUTT JOINT OVERLAY TRANSITION TO EXISTING
(4" TO 1 1/2")
N.T.S.



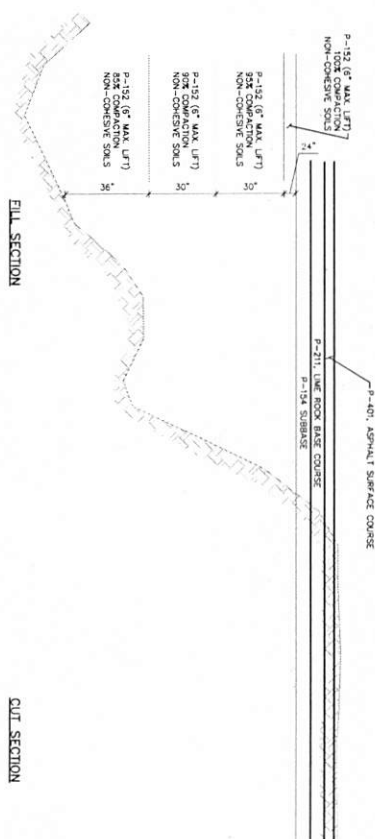
DETAIL 2 - BUTT JOINT OVERLAY TRANSITION TO EXISTING
(MILL 2" PAVE 4")
N.T.S.



DETAIL 3 - BUTT JOINT OVERLAY TRANSITION TO EXISTING
(MILL 1 1/2", PAVE 1 1/2")
N.T.S.



DETAIL 4 - TEMPORARY LIMEROCK BASE TRANSITION WEDGE



FILL SECTION

CUT SECTION

COMPACTION SCHEDULE NOTES:

THE SUBSTANTIAL NON-OVERLAP SHALL HAVE NATURAL BOUNDARIES SHOWN, SHALL BE LOCATED ON THE SURFACE OF THE ROCK, AND THE REQUIRED DISTANCES OF SHALL BE SPECIFIED IN THE FIELD LOG. THE DISTANCE FROM THE SURFACE OF THE ROCK TO THE SPECIFICATION IS-152 FOR OIL EXCAVATION REQUIREMENTS.

NON-OVERLAPING SOALS, FOR THE PURPOSE OF DETERMINING COMPLETION, ARE THOSE WITH A PL ¹/₂.

INER AREAS THAT WILL NOT BE PAID, ROLLING OPERATIONS SHALL BE CONTINUED UNTIL THE DRAINAGE IS COMPLETED TO NOT LESS THAN 95% OF MAXIMUM DENSITY FOR NON-OVERLAPING SOALS AND 90% OF MAXIMUM DENSITY FOR OVERLAPING SOALS PER ITS-152.

COMPACTION SCHEDULE


N.T.

Quantum
Kendall & Associates, Inc.
10000 Highway 100, Suite 100
Houston, TX 77036
Tel: 281-465-1100
Fax: 281-465-1101
www.quantumhvac.com

BID SET

| REVISIONS | | | | |
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 CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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| DRAWN BY: ALB | DATE: 05/04/202 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK: | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
TYPICAL SECTIONS

SHEET NO. C18

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| TOTAL: |
| CAD FILE: |
| 12708-MULTI-7 |
| DRAWING FILE NO. |
| 4-143-40 |



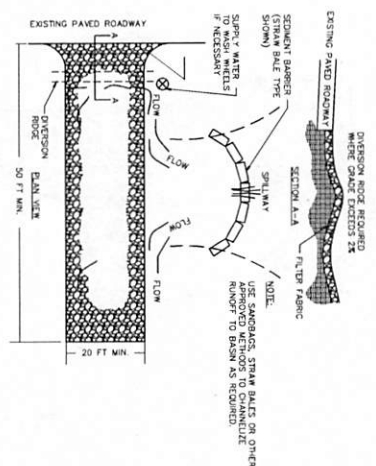
State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF FLOWING OR FLOWING OF SEDIMENT ONTO THE ADJACENT PAVED ROADWAY.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING ONTO PUBLIC RIGHT-OF-WAY.
3. DRAINAGE INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

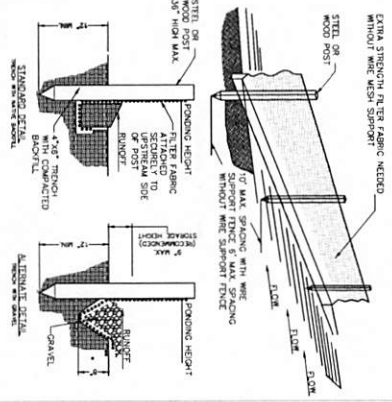
STABILIZED CONSTRUCTION ENTRANCE
 N.T.S.



NOTES:

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVE SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO EROSION OF THE SITE.
3. FENCE SHALL BE PLACED ON SLOPE CONDORS TO MAXIMIZE PROTECTING.

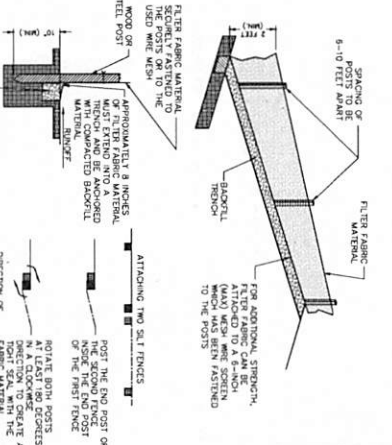
SILT FENCE DETAIL
 N.T.S.



NOTES:

1. REMOVE TRAPPED SEDIMENT WITH BROOMLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT WEETS ON EXCESSIVE REINFORCEMENT IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADHESION PAD OR FLOW OVER NET DRAIN WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT FOR REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRADED NEFT BOX.
6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRADED NEFT BOX.

SILT FENCE INSTALLATION DETAIL
 N.T.S.



BEST MANAGEMENT PRACTICE SEQUENCE:

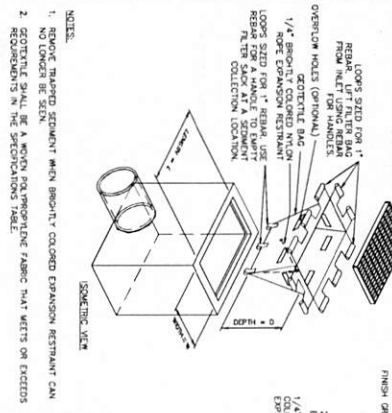
1. INSTALL SILT FENCE AND NEFT PROTECTION DEVICES ON EXISTING STRUCTURES.
2. BEGIN CLEANING AND GRADING THE SITE.
3. BEGIN CONSTRUCTION OF THE FACILITIES.
4. START CONSTRUCTION OF THE FACILITIES.
5. TEMPORARILY SEED THROUGHOUT CONSTRUCTION, DIVIDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE.
6. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
7. AT CONSTRUCTION COMPLETION, CONSTRUCTION IS TO ENSURE THAT ALL SEDIMENT TRAP IS REMOVED FROM ALL DIVIDED AREAS, SEDIMENT TRAPS, AND STRUCTURES.

GENERAL NOTES:

NOTES:

1. REMOVE TRAPPED SEDIMENT WITH BROOMLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT WEETS ON EXCESSIVE REINFORCEMENT IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADHESION PAD OR FLOW OVER NET DRAIN WHEN OIL SPILLS ARE A CONCERN.
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5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRADED NEFT BOX.
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7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRADED NEFT BOX.

FILTER SACK DETAIL
 N.T.S.



QUANTITY
 CALL 48 HOURS BEFORE YOU DO IT'S THE LAW!
 DIAL 811
 811
 CALL 48 HOURS BEFORE YOU DO IT'S THE LAW!
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 CALL 48 HOURS BEFORE YOU DO IT'S THE LAW!
 DIAL 811
 811

BID SET

PROJECT # 12708
 RUNWAY 9 RUN-UP AREA AND
 TW INTERSECTION IMPROVEMENTS
 EROSION CONTROL DETAILS

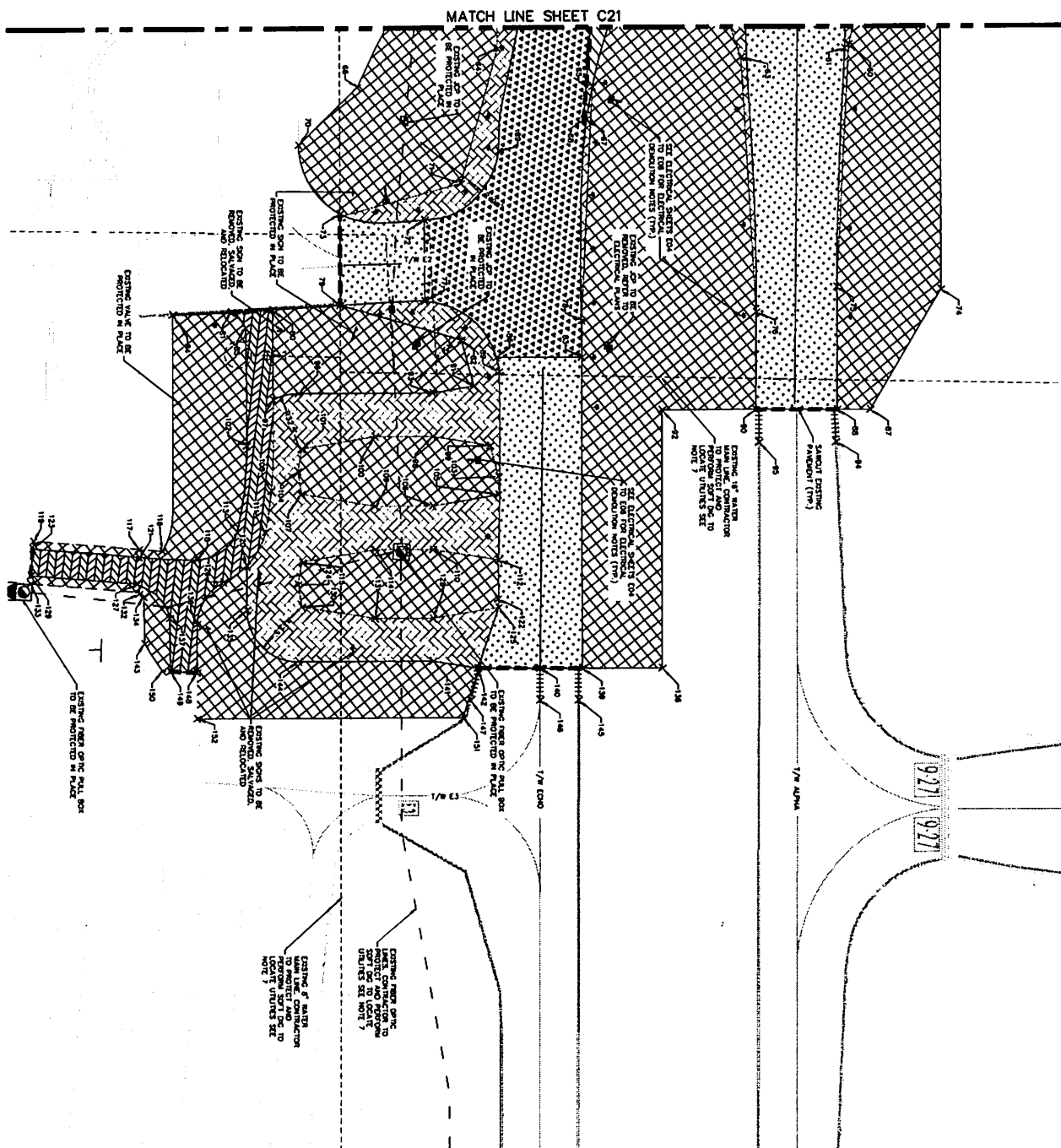
TOTAL 38
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CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

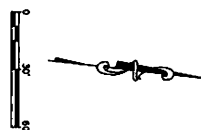
DRAWN BY: ALB
 DATE: 05/04/2022
 DESIGNED BY: KAS
 SCALE: AS NOTED
 CHECKED BY: TFO
 FIELD BOOK:

State of Florida
 Professional Engineer
 License No. 62478
 THOMAS F. O'DONNELL



DEMOLITION NOTES


- [illegible]

[illegible]

BID SET

| | |
|---|---|
| EXIST NO C22 OR TOTAL 50 CUB YDS 17708-WA-1-DEM REMAINING FILE NO 4-113-40 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS DEMOLITION PLANS |
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 **CITY OF FORT LAUDERDALE**
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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| DRAWN BY: ALB | DATE: 05/04/2022 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK: | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

| Point # | Point 10000 | | | Point # | Point 10001 | | | Point # | Point 10002 | | | Point # | Point 10003 | | | Point # | Point 10004 | | | Point # | Point 10005 | | | Point # | Point 10006 | | | Point # | Point 10007 | | | Point # | Point 10008 | | | Point # | Point 10009 | | | Point # | Point 10010 | | | Point # | Point 10011 | | | Point # | Point 10012 | | | Point # | Point 10013 | | | Point # | Point 10014 | | | Point # | Point 10015 | | | Point # | Point 10016 | | | Point # | Point 10017 | | | Point # | Point 10018 | | | Point # | Point 10019 | | | Point # | Point 10020 | | | Point # | Point 10021 | | | Point # | Point 10022 | | | Point # | Point 10023 | | | Point # | Point 10024 | | | Point # | Point 10025 | | | Point # | Point 10026 | | | Point # | Point 10027 | | | Point # | Point 10028 | | | Point # | Point 10029 | | | Point # | Point 10030 | | | Point # | Point 10031 | | | Point # | Point 10032 | | | Point # | Point 10033 | | | Point # | Point 10034 | | | Point # | Point 10035 | | | Point # | Point 10036 | | | Point # | Point 10037 | | | Point # | Point 10038 | | | Point # | Point 10039 | | | Point # | Point 10040 | | | Point # | Point 10041 | | | Point # | Point 10042 | | | Point # | Point 10043 | | | Point # | Point 10044 | | | Point # | Point 10045 | | | Point # | Point 10046 | | | Point # | Point 10047 | | | Point # | Point 10048 | | | Point # | Point 10049 | | | Point # | Point 10050 | | | Point # | Point 10051 | | | Point # | Point 10052 | | | Point # | Point 10053 | | | Point # | Point 10054 | | | Point # | Point 10055 | | | Point # | Point 10056 | | | Point # | Point 10057 | | | Point # | Point 10058 | | | Point # | Point 10059 | | | Point # | Point 10060 | | | Point # | Point 10061 | | | Point # | Point 10062 | | | Point # | Point 10063 | | | Point # | Point 10064 | | | Point # | Point 10065 | | | Point # | Point 10066 | | | Point # | Point 10067 | | | Point # | Point 10068 | | | Point # | Point 10069 | | | Point # | Point 10070 | | | Point # | Point 10071 | | | Point # | Point 10072 | | | Point # | Point 10073 | | | Point # |
|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|
|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|-------------|--|--|---------|

NOTE:
DATUM NAD83 WAS UTILIZED TO DETERMINE COORDINATE LOCATION

[illegible]

BID SET

| | | |
|---------------|----|--|
| PROJECT NO. | 07 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS DEMOLITION LOCATION COORDINATES |
| CAD FILE: | | |
| ISSUING FIRM: | | |
| DATE: | | |

[illegible]

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|---------------------|---------------------|
| DRAWN BY: ALB | DATE: 05/04/2021 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

| Point # | Beginning | Ending |
|---------|------------|------------|
| 1 | 87708.2178 | 87708.2178 |
| 2 | 87708.2178 | 87708.2178 |
| 3 | 87708.2178 | 87708.2178 |
| 4 | 87708.2178 | 87708.2178 |
| 5 | 87708.2178 | 87708.2178 |
| 6 | 87708.2178 | 87708.2178 |
| 7 | 87708.2178 | 87708.2178 |
| 8 | 87708.2178 | 87708.2178 |
| 9 | 87708.2178 | 87708.2178 |
| 10 | 87708.2178 | 87708.2178 |

| Point # | Beginning | Ending |
|---------|------------|------------|
| 11 | 87708.2178 | 87708.2178 |
| 12 | 87708.2178 | 87708.2178 |
| 13 | 87708.2178 | 87708.2178 |
| 14 | 87708.2178 | 87708.2178 |
| 15 | 87708.2178 | 87708.2178 |
| 16 | 87708.2178 | 87708.2178 |
| 17 | 87708.2178 | 87708.2178 |
| 18 | 87708.2178 | 87708.2178 |
| 19 | 87708.2178 | 87708.2178 |
| 20 | 87708.2178 | 87708.2178 |

| Point # | Beginning | Ending |
|---------|------------|------------|
| 21 | 87708.2178 | 87708.2178 |
| 22 | 87708.2178 | 87708.2178 |
| 23 | 87708.2178 | 87708.2178 |
| 24 | 87708.2178 | 87708.2178 |
| 25 | 87708.2178 | 87708.2178 |
| 26 | 87708.2178 | 87708.2178 |
| 27 | 87708.2178 | 87708.2178 |
| 28 | 87708.2178 | 87708.2178 |
| 29 | 87708.2178 | 87708.2178 |
| 30 | 87708.2178 | 87708.2178 |

| Point # | Beginning | Ending |
|---------|------------|------------|
| 31 | 87708.2178 | 87708.2178 |
| 32 | 87708.2178 | 87708.2178 |
| 33 | 87708.2178 | 87708.2178 |
| 34 | 87708.2178 | 87708.2178 |
| 35 | 87708.2178 | 87708.2178 |
| 36 | 87708.2178 | 87708.2178 |
| 37 | 87708.2178 | 87708.2178 |
| 38 | 87708.2178 | 87708.2178 |
| 39 | 87708.2178 | 87708.2178 |
| 40 | 87708.2178 | 87708.2178 |
| 41 | 87708.2178 | 87708.2178 |

| Point # | Beginning | Ending |
|---------|------------|------------|
| 42 | 87708.2178 | 87708.2178 |
| 43 | 87708.2178 | 87708.2178 |
| 44 | 87708.2178 | 87708.2178 |
| 45 | 87708.2178 | 87708.2178 |
| 46 | 87708.2178 | 87708.2178 |
| 47 | 87708.2178 | 87708.2178 |
| 48 | 87708.2178 | 87708.2178 |
| 49 | 87708.2178 | 87708.2178 |
| 50 | 87708.2178 | 87708.2178 |
| 51 | 87708.2178 | 87708.2178 |
| 52 | 87708.2178 | 87708.2178 |

| Point # | Beginning | Ending |
|---------|------------|------------|
| 53 | 87708.2178 | 87708.2178 |
| 54 | 87708.2178 | 87708.2178 |
| 55 | 87708.2178 | 87708.2178 |
| 56 | 87708.2178 | 87708.2178 |
| 57 | 87708.2178 | 87708.2178 |
| 58 | 87708.2178 | 87708.2178 |
| 59 | 87708.2178 | 87708.2178 |
| 60 | 87708.2178 | 87708.2178 |
| 61 | 87708.2178 | 87708.2178 |
| 62 | 87708.2178 | 87708.2178 |
| 63 | 87708.2178 | 87708.2178 |

| Point # | Beginning | Ending |
|---------|------------|------------|
| 64 | 87708.2178 | 87708.2178 |
| 65 | 87708.2178 | 87708.2178 |
| 66 | 87708.2178 | 87708.2178 |
| 67 | 87708.2178 | 87708.2178 |
| 68 | 87708.2178 | 87708.2178 |
| 69 | 87708.2178 | 87708.2178 |
| 70 | 87708.2178 | 87708.2178 |
| 71 | 87708.2178 | 87708.2178 |
| 72 | 87708.2178 | 87708.2178 |
| 73 | 87708.2178 | 87708.2178 |
| 74 | 87708.2178 | 87708.2178 |

NOTE:
DATA MAJOR WAS UTILIZED TO CORRELATE COORDINATE LOCATION

QUANTITY

CALL 48 HOURS BEFORE ORDERING
FOR THE LATEST
IT'S THE LAW
DAILY
CALL 48 HOURS BEFORE ORDERING
FOR THE LATEST
IT'S THE LAW
DAILY

BID SET

| | |
|--|----------------------------|
| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS DEMOLITION LOCATION COORDINATES - ALT 1 | TOTAL C23A 38 |
|--|----------------------------|

| NO | DATE | BY | CHK | DESCRIPTION |
|----|------|----|-----|-------------|
| | | | | |
| | | | | |
| | | | | |

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|------------------|------------|
| DATE: 05/04/2022 | AS NOTED |
| RECORD BY: KAS | FIELD BOOK |

State of Florida
Professional Engineer
License No. 62478

THOMAS F. O'DONNELL

[illegible]

| Point # | Item Description | Reaching | Exiting |
|---------|------------------|-------------|-------------|
| 43 | PT | 071723.7473 | 072004.7210 |
| 44 | PT | 07171.50009 | 072004.7210 |
| 45 | PT | 071739.4887 | 072001.7210 |
| 46 | PT | 071738.4448 | 072001.7210 |
| 47 | PT | 071739.4744 | 072001.7210 |
| 48 | PT | 071739.4744 | 072001.7210 |
| 49 | PT | 071739.4744 | 072001.7210 |
| 50 | PT | 071739.4744 | 072001.7210 |
| 51 | PT | 071739.4744 | 072001.7210 |
| 52 | PT | 071739.4744 | 072001.7210 |
| 53 | PT | 071739.4744 | 072001.7210 |
| 54 | PT | 071739.4744 | 072001.7210 |
| 55 | PT | 071739.4744 | 072001.7210 |
| 56 | PT | 071739.4744 | 072001.7210 |
| 57 | PT | 071739.4744 | 072001.7210 |
| 58 | PT | 071739.4744 | 072001.7210 |
| 59 | PT | 071739.4744 | 072001.7210 |
| 60 | PT | 071739.4744 | 072001.7210 |
| 61 | PT | 071739.4744 | 072001.7210 |
| 62 | PT | 071739.4744 | 072001.7210 |
| 63 | PT | 071739.4744 | 072001.7210 |
| 64 | PT | 071739.4744 | 072001.7210 |
| 65 | PT | 071739.4744 | 072001.7210 |
| 66 | PT | 071739.4744 | 072001.7210 |
| 67 | PT | 071739.4744 | 072001.7210 |
| 68 | PT | 071739.4744 | 072001.7210 |
| 69 | PT | 071739.4744 | 072001.7210 |
| 70 | PT | 071739.4744 | 072001.7210 |
| 71 | PT | 071739.4744 | 072001.7210 |
| 72 | PT | 071739.4744 | 072001.7210 |
| 73 | PT | 071739.4744 | 072001.7210 |
| 74 | PT | 071739.4744 | 072001.7210 |
| 75 | PT | 071739.4744 | 072001.7210 |
| 76 | PT | 071739.4744 | 072001.7210 |
| 77 | PT | 071739.4744 | 072001.7210 |
| 78 | PT | 071739.4744 | 072001.7210 |
| 79 | PT | 071739.4744 | 072001.7210 |
| 80 | PT | 071739.4744 | 072001.7210 |
| 81 | PT | 071739.4744 | 072001.7210 |
| 82 | PT | 071739.4744 | 072001.7210 |
| 83 | PT | 071739.4744 | 072001.7210 |
| 84 | PT | 071739.4744 | 072001.7210 |
| 85 | PT | 071739.4744 | 072001.7210 |

| Point # | Item Description | Point Notes | |
|---------|------------------|-----------------|--------------------|
| | | Existing | Proposed |
| 63 | PT | 87781.44, 12681 | 87571.27, 12688 |
| 64 | PT | 87781.20, 12690 | 87571.27, 12690 |
| 65 | PT | 87570.98, 12697 | 87523.04, 12694.54 |
| 66 | PT | 87700.84, 12707 | 87570.98, 12707 |
| 67 | PT | 87711.02, 12712 | 87570.98, 12712 |
| 68 | PT | 87702.74, 12721 | 87570.98, 12721 |
| 69 | PT | 87702.74, 12731 | 87570.98, 12731 |
| 70 | PT | 87702.74, 12741 | 87570.98, 12741 |
| 71 | PT | 87702.74, 12751 | 87570.98, 12751 |
| 72 | PT | 87702.74, 12761 | 87570.98, 12761 |
| 73 | PT | 87702.74, 12771 | 87570.98, 12771 |
| 74 | PT | 87702.74, 12781 | 87570.98, 12781 |
| 75 | PT | 87702.74, 12791 | 87570.98, 12791 |
| 76 | PT | 87702.74, 12801 | 87570.98, 12801 |
| 77 | PT | 87702.74, 12811 | 87570.98, 12811 |
| 78 | PT | 87702.74, 12821 | 87570.98, 12821 |
| 79 | PT | 87702.74, 12831 | 87570.98, 12831 |
| 80 | PT | 87702.74, 12841 | 87570.98, 12841 |
| 81 | PT | 87702.74, 12851 | 87570.98, 12851 |
| 82 | PT | 87702.74, 12861 | 87570.98, 12861 |
| 83 | PT | 87702.74, 12871 | 87570.98, 12871 |
| 84 | PT | 87702.74, 12881 | 87570.98, 12881 |
| 85 | PT | 87702.74, 12891 | 87570.98, 12891 |
| 86 | PT | 87702.74, 12901 | 87570.98, 12901 |
| 87 | PT | 87702.74, 12911 | 87570.98, 12911 |
| 88 | PT | 87702.74, 12921 | 87570.98, 12921 |
| 89 | PT | 87702.74, 12931 | 87570.98, 12931 |
| 90 | PT | 87702.74, 12941 | 87570.98, 12941 |
| 91 | PT | 87702.74, 12951 | 87570.98, 12951 |
| 92 | PT | 87702.74, 12961 | 87570.98, 12961 |
| 93 | PT | 87702.74, 12971 | 87570.98, 12971 |
| 94 | PT | 87702.74, 12981 | 87570.98, 12981 |
| 95 | PT | 87702.74, 12991 | 87570.98, 12991 |
| 96 | PT | 87702.74, 13001 | 87570.98, 13001 |
| 97 | PT | 87702.74, 13011 | 87570.98, 13011 |
| 98 | PT | 87702.74, 13021 | 87570.98, 13021 |
| 99 | PT | 87702.74, 13031 | 87570.98, 13031 |
| 100 | PT | 87702.74, 13041 | 87570.98, 13041 |
| 101 | PT | 87702.74, 13051 | 87570.98, 13051 |
| 102 | PT | 87702.74, 13061 | 87570.98, 13061 |
| 103 | PT | 87702.74, 13071 | 87570.98, 13071 |
| 104 | PT | 87702.74, 13081 | 87570.98, 13081 |
| 105 | PT | 87702.74, 13091 | 87570.98, 13091 |
| 106 | PT | 87702.74, 13101 | 87570.98, 13101 |
| 107 | PT | 87702.74, 13111 | 87570.98, 13111 |
| 108 | PT | 87702.74, 13121 | 87570.98, 13121 |
| 109 | PT | 87702.74, 13131 | 87570.98, 13131 |
| 110 | PT | 87702.74, 13141 | 87570.98, 13141 |
| 111 | PT | 87702.74, 13151 | 87570.98, 13151 |
| 112 | PT | 87702.74, 13161 | 87570.98, 13161 |
| 113 | PT | 87702.74, 13171 | 87570.98, 13171 |
| 114 | PT | 87702.74, 13181 | 87570.98, 13181 |
| 115 | PT | 87702.74, 13191 | 87570.98, 13191 |
| 116 | PT | 87702.74, 13201 | 87570.98, 13201 |
| 117 | PT | 87702.74, 13211 | 87570.98, 13211 |
| 118 | PT | 87702.74, 13221 | 87570.98, 13221 |
| 119 | PT | 87702.74, 13231 | 87570.98, 13231 |
| 120 | PT | 87702.74, 13241 | 87570.98, 13241 |
| 121 | PT | 87702.74, 13251 | 87570.98, 13251 |
| 122 | PT | 87702.74, 13261 | 87570.98, 13261 |
| 123 | PT | 87702.74, 13271 | 87570.98, 13271 |
| 124 | PT | 87702.74, 13281 | 87570.98, 13281 |
| 125 | PT | 87702.74, 13291 | 87570.98, 13291 |
| 126 | PT | 87702.74, 13301 | 87570.98, 13301 |

| Point # | Flow Direction | Year 1998 | |
|---------|----------------|------------|-------------|
| | | Marching | Easting |
| 127 | PT | 87781.3446 | 852436.1236 |
| 128 | PT | 87781.3446 | 852436.1236 |
| 129 | PT | 87781.3446 | 852437.1410 |
| 130 | PT | 87781.3446 | 852437.1410 |
| 131 | PT | 87781.3446 | 852437.1410 |
| 132 | PT | 87781.3446 | 852437.1410 |
| 133 | PT | 87781.3446 | 852437.1410 |
| 134 | PT | 87781.3446 | 852437.1410 |
| 135 | PT | 87781.3446 | 852437.1410 |
| 136 | PT | 87781.3446 | 852437.1410 |
| 137 | PT | 87781.3446 | 852437.1410 |
| 138 | PT | 87781.3446 | 852437.1410 |
| 139 | PT | 87781.3446 | 852437.1410 |
| 140 | PT | 87781.3446 | 852437.1410 |
| 141 | PT | 87781.3446 | 852437.1410 |
| 142 | PT | 87781.3446 | 852437.1410 |
| 143 | PT | 87781.3446 | 852437.1410 |
| 144 | PT | 87781.3446 | 852437.1410 |
| 145 | PT | 87781.3446 | 852437.1410 |
| 146 | PT | 87781.3446 | 852437.1410 |
| 147 | PT | 87781.3446 | 852437.1410 |
| 148 | PT | 87781.3446 | 852437.1410 |
| 149 | PT | 87781.3446 | 852437.1410 |
| 150 | PT | 87781.3446 | 852437.1410 |
| 151 | PT | 87781.3446 | 852437.1410 |
| 152 | PT | 87781.3446 | 852437.1410 |
| 153 | PT | 87781.3446 | 852437.1410 |
| 154 | PT | 87781.3446 | 852437.1410 |
| 155 | PT | 87781.3446 | 852437.1410 |
| 156 | PT | 87781.3446 | 852437.1410 |
| 157 | PT | 87781.3446 | 852437.1410 |
| 158 | PT | 87781.3446 | 852437.1410 |

| Index | Name | Description | Total Index | |
|-------|------|--------------|-------------|-------------|
| | | | Numbering | Exiting |
| 159 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 170 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 171 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 172 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 173 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 174 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 175 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 176 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 177 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 178 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 179 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 180 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 181 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 182 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 183 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 184 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 185 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 186 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 187 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 188 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 189 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 190 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 200 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 201 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 202 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 203 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 204 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 205 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |
| 206 | PT | 8778721.7701 | 8752545.584 | 8752545.584 |

NOTE:
DATUM NAD83 WAS UTILIZED TO DETERMINE COORDINATE LOCATION

[illegible]**BID SET**

| | | | | |
|-------------------|----|------------|-----|---|
| PROJECT NO. | | C27 | 10' | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PAVEMENT GEOMETRY COORDINATES |
| TOTAL | | | | |
| CD TYPE: | 3B | | | |
| DRAWING TITLE NO. | | | | |
| DATE | | | | |
| BY | | | | |

[illegible]

 CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|---------------------|---------------------|
| DRAWN BY: ALB | DATE: 05/04/2022 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK: | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

| Point # | Run Description | Beginning | Ending |
|---------|-----------------|------------|------------|
| 1 | P1 | 67704.2178 | 67704.1837 |
| 2 | P1 | 67704.4402 | 67704.2517 |
| 3 | P1 | 67704.0715 | 67704.2517 |
| 4 | P1 | 67704.3379 | 67704.4582 |
| 5 | P1 | 67704.5171 | 67704.2721 |
| 6 | P1 | 67704.6245 | 67704.4582 |
| 7 | P1 | 67704.5958 | 67704.2517 |
| 8 | P1 | 67704.5182 | 67704.1717 |
| 9 | P1 | 67704.2537 | 67704.2517 |
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| Point # | Run Description | Beginning | Ending |
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| Point # | Run Description | Beginning | Ending |
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| Point # | Run Description | Beginning | Ending |
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| Point # | Run Description | Beginning | Ending |
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| 222 | P1 | 67704.4402 | 67704.2517 |

NOTE:
DATA WAS UTILIZED TO DETERMINE COORDINATE LOCATION

QUANTUM

Professional Engineer

License No. 62478

THOMAS F. O'DONNELL

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW

CALL 811

811

CALL 48 HOURS BEFORE DIGGING

FOR FACILITIES 954-266-7112

BID SET

PROJECT # 12708

RUNWAY 9 RUN-UP AREA AND

TW INTERSECTION IMPROVEMENTS

PAVEMENT GEOMETRY COORDINATES - ALT 1

REVISIONS

| NO | DATE | BY | DESCRIPTION |
|----|------|----|-------------|
| | | | |

CITY OF FORT LAUDERDALE

PUBLIC WORKS DEPARTMENT

ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DATE: 05/04/2022

SCALE: AS NOTED

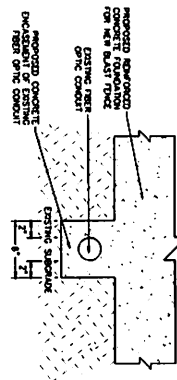
FIELD BOOK:

State of Florida

Professional Engineer

License No. 62478

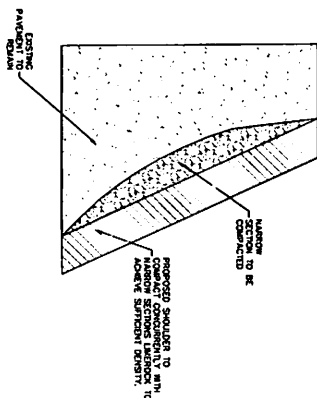
THOMAS F. O'DONNELL



GEOMETRY DETAIL 1 - CONCRETE ENCASING FIBER OPTIC CONDUIT UNDER PROPOSED BLAST FENCE FOUNDATION

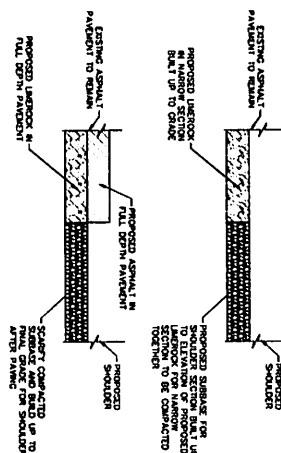
N.T.S.

NOTE:
PERFORM UTILITY SURVEY THROUGH THE EXISTING SUBGRADE TO LOCATED CONDUIT, THEN ENCASE IN CONCRETE AS PER THE DETAIL. ANY DAMAGE TO THE CONDUIT/FIBER OPTIC CABLE IS TO BE REPAIRED BY THE CONTRACTOR AT NO CHARGE TO THE OWNER. REFER TO STRUCTURAL SHEETS FOR LAYOUT OF BLAST FENCE FOUNDATION.



GEOMETRY DETAIL 2 - NARROW COMPACTION SECTIONS

N.T.S.



Quantity
17208-C28-021
1-11-10

CALL 48 HOURS BEFORE YOU DO IT'S THE LAW!
DIAL 311
CALL 48 HOURS BEFORE YOU DO IT'S THE LAW!
DIAL 311
PAVEMENTS 954-585-7212

BID SET

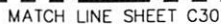
PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
PAVEMENT GEOMETRY DETAILS

REVISIONS
NO. DATE BY CHD DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGN BY: AD
DATE: 05/04/2022
CHECKED BY: HAS
SCALE: AS NOTED
FIELD BOOK

State of Florida
Professional Engineer
License No. 63478
THOMAS F. O'DONNELL



-

| LEGEND |
|---------------------------|
| 3" DIA |
| ELECTRIC HAND HOLE |
| TANKWAY SIGN |
| TANKWAY EDCG LIGHT |
| COMMUNICATION VAULT |
| CONCRETE PAD |
| EXISTING FIBER PULL BOX |
| EXISTING FIBER COAX CABLE |
| EXISTING CONDUIT |
| EXISTING FIBER OPTIC LINE |
| PROPOSED CONDUIT |
| EXISTING FIBER OPTIC LINE |

Employment
Kempster and Associates, Inc.
Executive Search and Recruitment
10000 Wilshire Blvd., Suite 1000
Beverly Hills, CA 90210
800/368-7272

QUANTUM
Quantum Technology Inc.
10000 Wilshire Blvd., Suite 1000
Beverly Hills, CA 90210
800/368-7272

811
Know what's below?
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800/452-4242

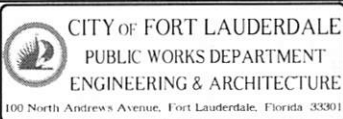
CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW
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Know what's below?
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800/452-4242

CALL 48 HOURS BEFORE DIGGING
FAN FACILITIES 954-566-7102

811
Know what's below?
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800/452-4242

BID SET

| | |
|---|---|
| SHEET NO. C29 C&G FILE 12708-M&T-C DRAWING FILE NO. 4-1A3-60 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS GRADING PLAN |
|---|---|

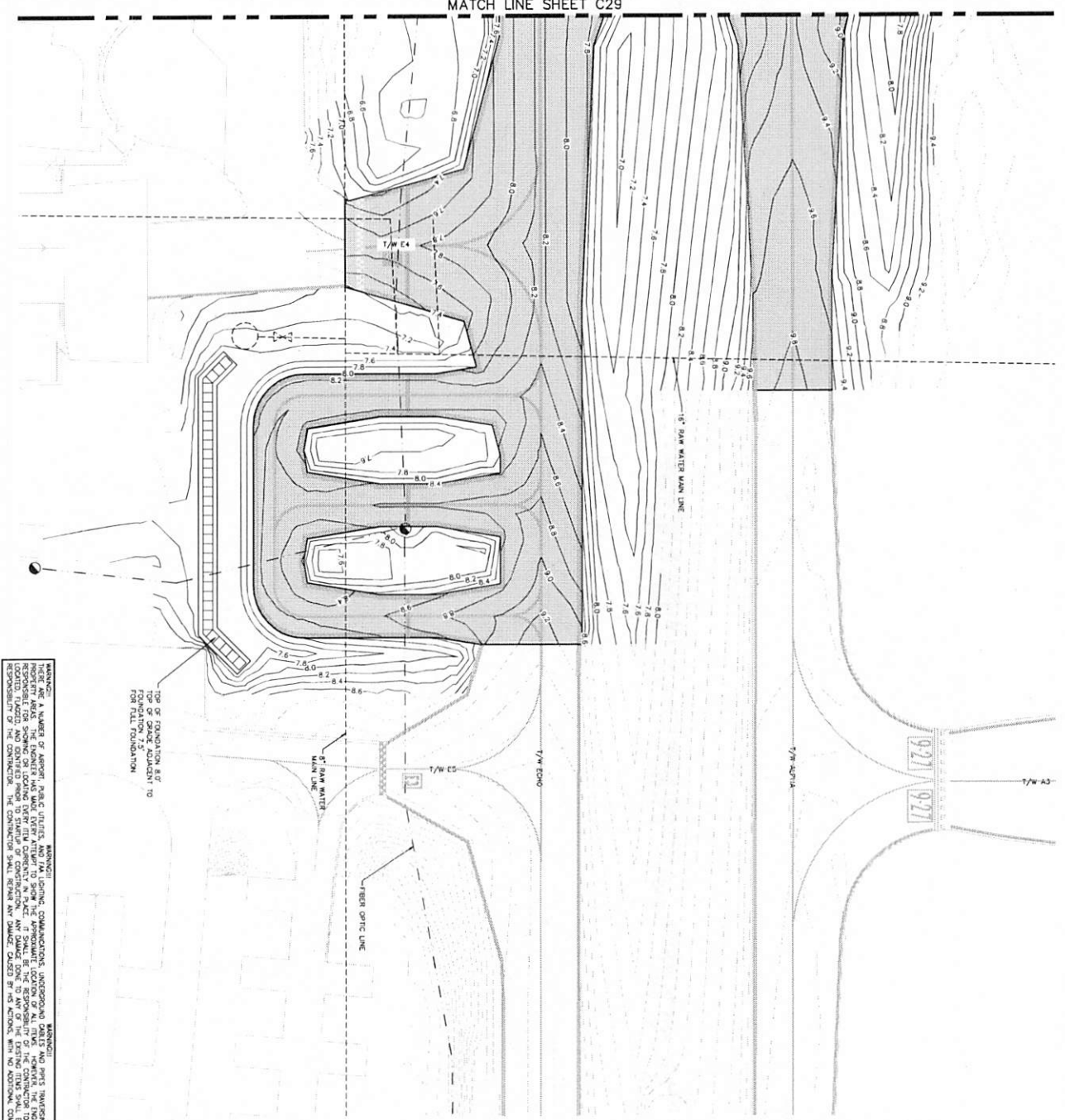
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| DRAWN BY: ALB | DATE: 05/04/2022 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

MATCH LINE SHEET C29



NOTES:
1. THESE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND TAXI LANDING, COMMUNICATIONS, UNDERGROUND DRAINS AND PIPES TRAVELING THE AIRFIELD.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
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811
CALL 48 HOURS BEFORE DIGGING
BEFORE YOU DIG
IT'S THE LAW
CALL 811
FOR A FREE SERVICE
CALL 811
FOR A FREE SERVICE
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FOR A FREE SERVICE

QUANTUM
CALL 48 HOURS BEFORE DIGGING
BEFORE YOU DIG
IT'S THE LAW
CALL 811
FOR A FREE SERVICE
CALL 811
FOR A FREE SERVICE
CALL 811
FOR A FREE SERVICE

- LEGEND
- BENCHMARK
 - ELECTRIC AND HOSE
 - TAXIWAY SIDE LIGHT
 - TAXIWAY EDGE LIGHT
 - COMMUNICATION WALT
 - CONCRETE PAD
 - EXISTING FIBER PULL BOX
 - EXISTING FIBER CABLE
 - EXISTING FIBER OPTIC LINE
 - EXISTING CONDUIT
 - PROPOSED CONDUIT
 - EXISTING FIBER OPTIC LINE

- NOTES
- UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
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 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.



BID SET

PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
GRADING PLAN

C30

| REVISIONS | | | |
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| NO | DATE | BY | DESCRIPTION |
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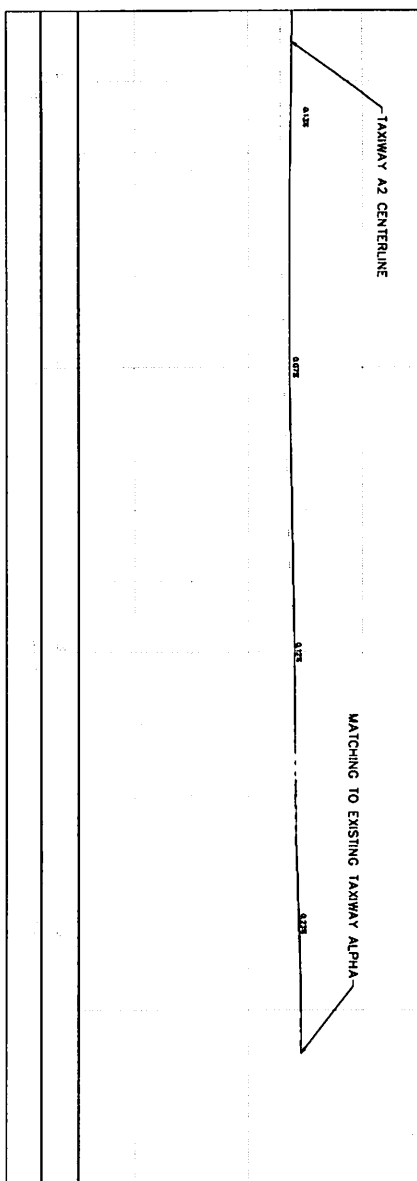
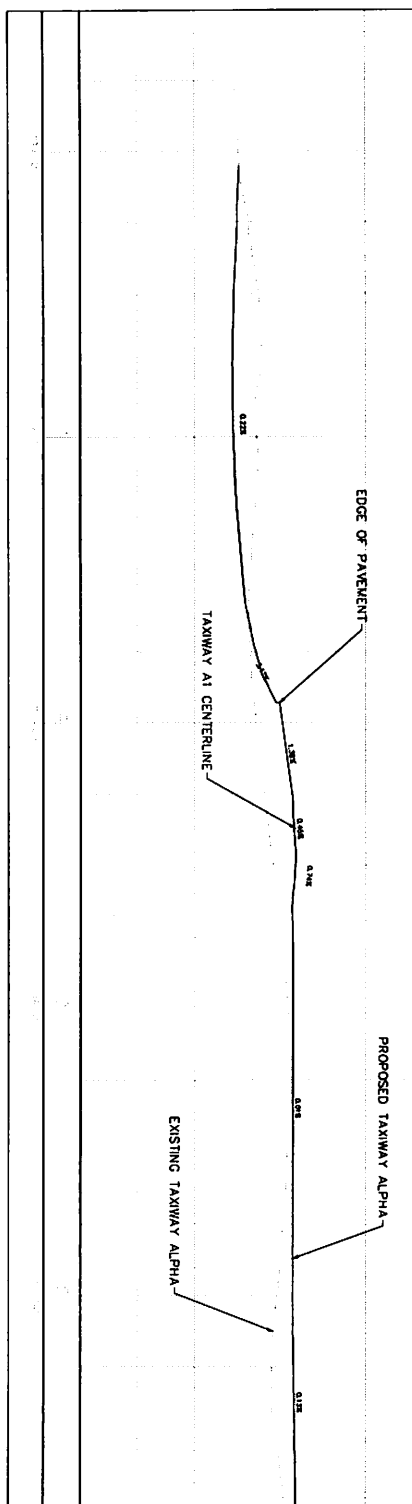
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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| DRAWN BY: | AD |
| CHECKED BY: | MAC |
| DATE: | 02/04/2022 |
| SCALE: | AS NOTED |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL



1. REMOVE SHEETS 225 - 226 FOR GEOTECH. LAYOUT.
2. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE CHEMICAL WASTE SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. TAKE CARE DURING CONSTRUCTION TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.

Call 49 hours before you die

IT'S THE LAW:
DIAL 011

Know your liability.
Call today and get
the facts.

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| SHEET NO. 17 TOTAL 38 C&D FILE NO. 11709-WA-11-002 GRADING FILE NO. 1-113-40 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS GRADING PROFILES |
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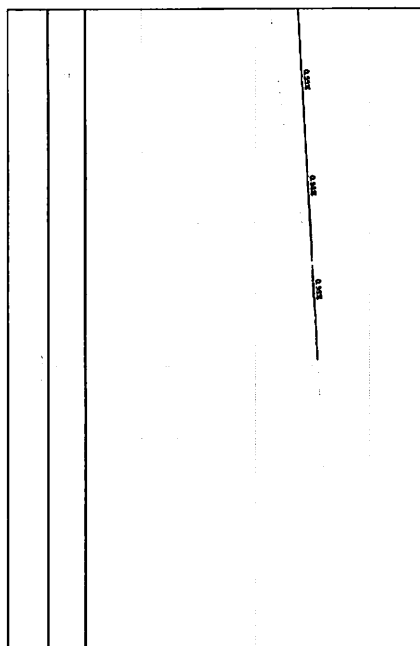
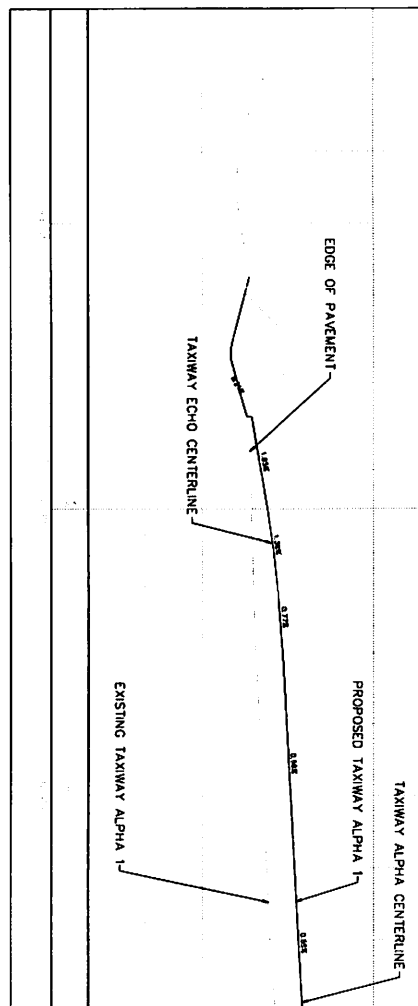
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1. REFERENCE SHEETS C25 - C28 FOR GEOMETRY LAYOUT.
2. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. TAKE CARE DURING CONSTRUCTION TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.

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| SHEET NO. C33 OF 38 | C&G FILE 17708-A&I-1007 GRADING FILE NO. 1-113-00 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS GRADING PROFILES |
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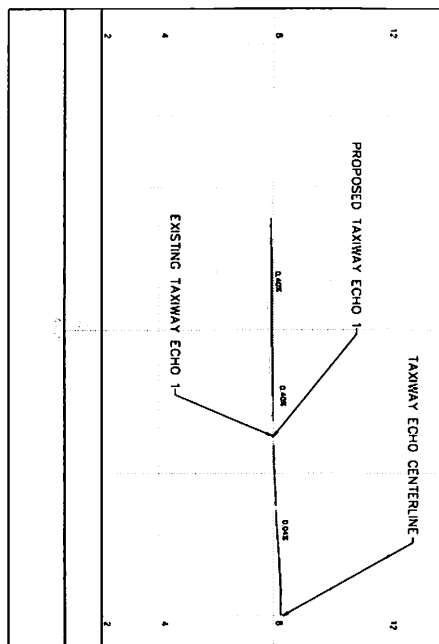
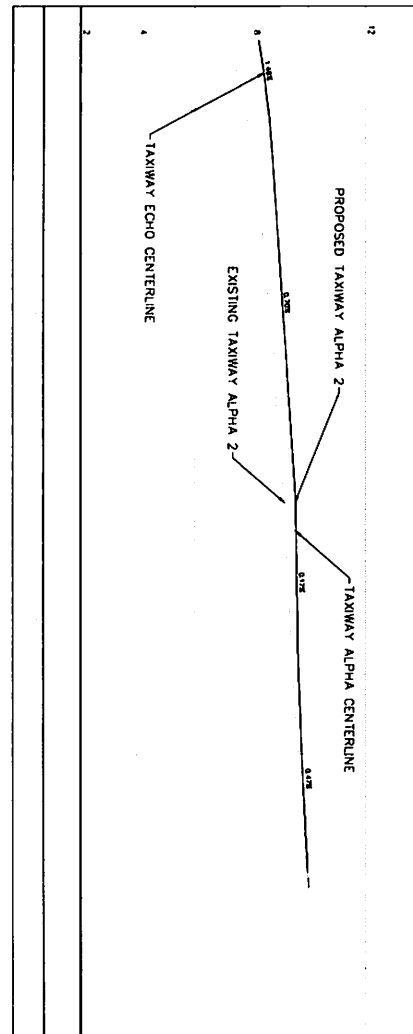
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| FIELD BOOK | |

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Professional Engineer
License No. 62478

THOMAS F.
ODONNELL



1. REFERENCE SHEETS C23 - C28 FOR GEOTECHNICAL LAYOUT.
2. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE CORRELATION TO OBTAIN UNDERGROUND UTILITY LOCATIONS AS REQUIRED BY LAW. SEE GEOTECHNICAL NOTITS SHEET 01 AT FACILITIES ARE TO BE OBTAIN FACTS" MATERIALS, OTHERS, SHOW, TAIL GATE, DURING CONSTRUCTION TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.

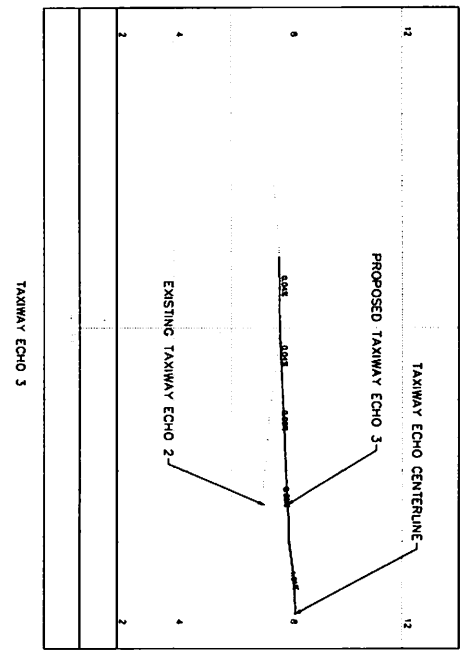
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| SHEET NO. C34 TOTAL 38 DRAWING TITLE 17208-04-1-1-00 4-13-00 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS GRADING PROFILES | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">REVISIONS</th> </tr> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REVISIONS | | | | | NO | DATE | BY | CHKD | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING & ARCHITECTURE 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> DRAWN BY ALB DESIGNED BY KAS CHECKED BY YTO FIELD BOOK </td> <td style="width: 50%;"> DATE 05/04/2002 SCALE AS NOTED </td> </tr> </table> | DRAWN BY ALB DESIGNED BY KAS CHECKED BY YTO FIELD BOOK | DATE 05/04/2002 SCALE AS NOTED | State of Florida Professional Engineer License No. 62478 THOMAS F. O'DONNELL |
|---|---|---|-----------|-------------|--|--|--|----|------|----|------|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|---|---|--|
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1. REFERENCE SHEET C23 - C28 FOR EXISTING LAYOUT.
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GRADING PROFILES

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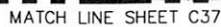
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License No. 62478

THOMAS F. O'DONNELL



R/m 9-27

1. REFER TO SHEETS C25 TO C28 FOR PAVING AND GEOMETRY PLANS.
2. REFER TO SHEETS C29 TO C30 FOR GRADING PLANS.
3. REFER TO SHEET C21 TO C22 FOR DEMOLITION REQUIREMENTS.
4. SEE "TYPICAL SECTIONS" SHEET NOS. C17 & C18.
5. GRID IS 12.5' (VERTICAL) X 25' (HORIZONTAL) UNLESS OTHERWISE NOTED.

CONSTRUCT NEW PAVEMENT SECTION TO GRADE

SPOT ELEVATION
RUNWAY SAFETY AREA
TAXWAY SAFETY AREA
TAXWAY OBJECT FREE AREA
EXISTING FIBER OPTIC LINE


THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THE ELEVATIONS HEREON TO NATIONAL GEODETHIC VERTICAL DATUM (NGVD29) ADD 1.51 FEET.

BID SET

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| SHEET NO. | C36 |
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| 12708-MULT | |
| DRAWING FILE: | |
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PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
SPOT ELEVATION PLAN

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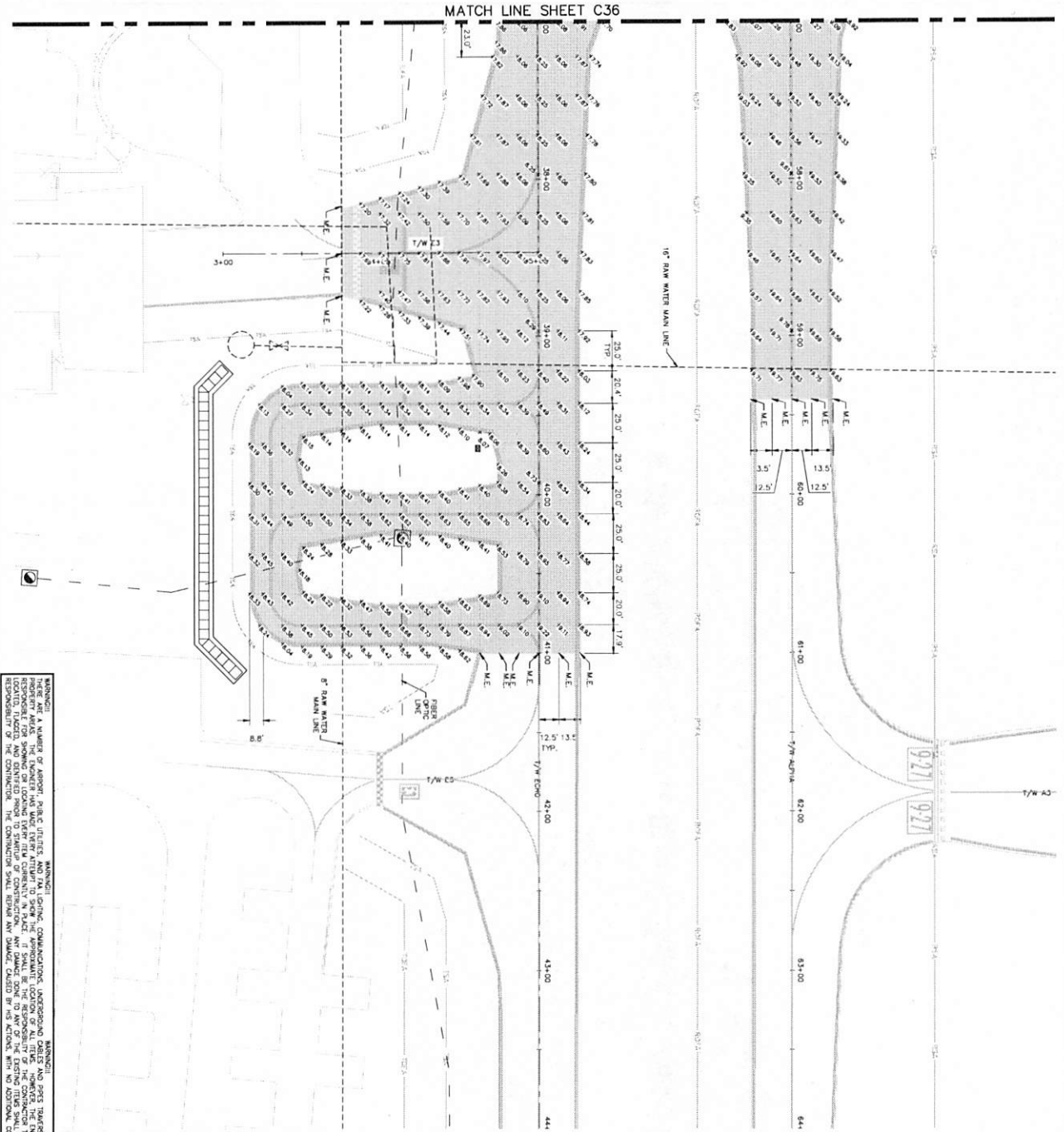


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Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL



NOTES:
 THESE ARE A NUMBER OF APPROXIMATE, PUBLIC UTILITIES AND TAXI LANDING, COMMUNICATION, UNDERGROUND DRAINAGE AND POWER TRANSMISSION LINES. THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.

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LEGEND (SYMBOLS)
 SPOT ELEVATION
 RUNWAY SAFETY AREA
 TAXIWAY SAFETY AREA
 TAXIWAY OBJECT FREE AREA
 EXISTING PAVED DRIVE LINE

LEGEND (LINES)
 CONSTRUCT NEW PAVEMENT SECTION TO GRADE

- NOTES**
1. REFER TO SHEETS C25 TO C28 FOR PAVING AND GEOMETRY PLANS.
 2. REFER TO SHEETS C29 TO C30 FOR GRADING PLANS.
 3. REFER TO SHEET C21 TO C22 FOR DEMOLITION REQUIREMENTS.
 4. SEE "TYPICAL SECTIONS" SHEET NOS. C17 & C18.
 5. SPO IS 12.5' (VERTICAL) X 25' (HORIZONTAL) UNLESS OTHERWISE NOTED.



BID SET

PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
SPOT ELEVATION PLAN

C37

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12708-MULTI-ELEV
 1-14-20

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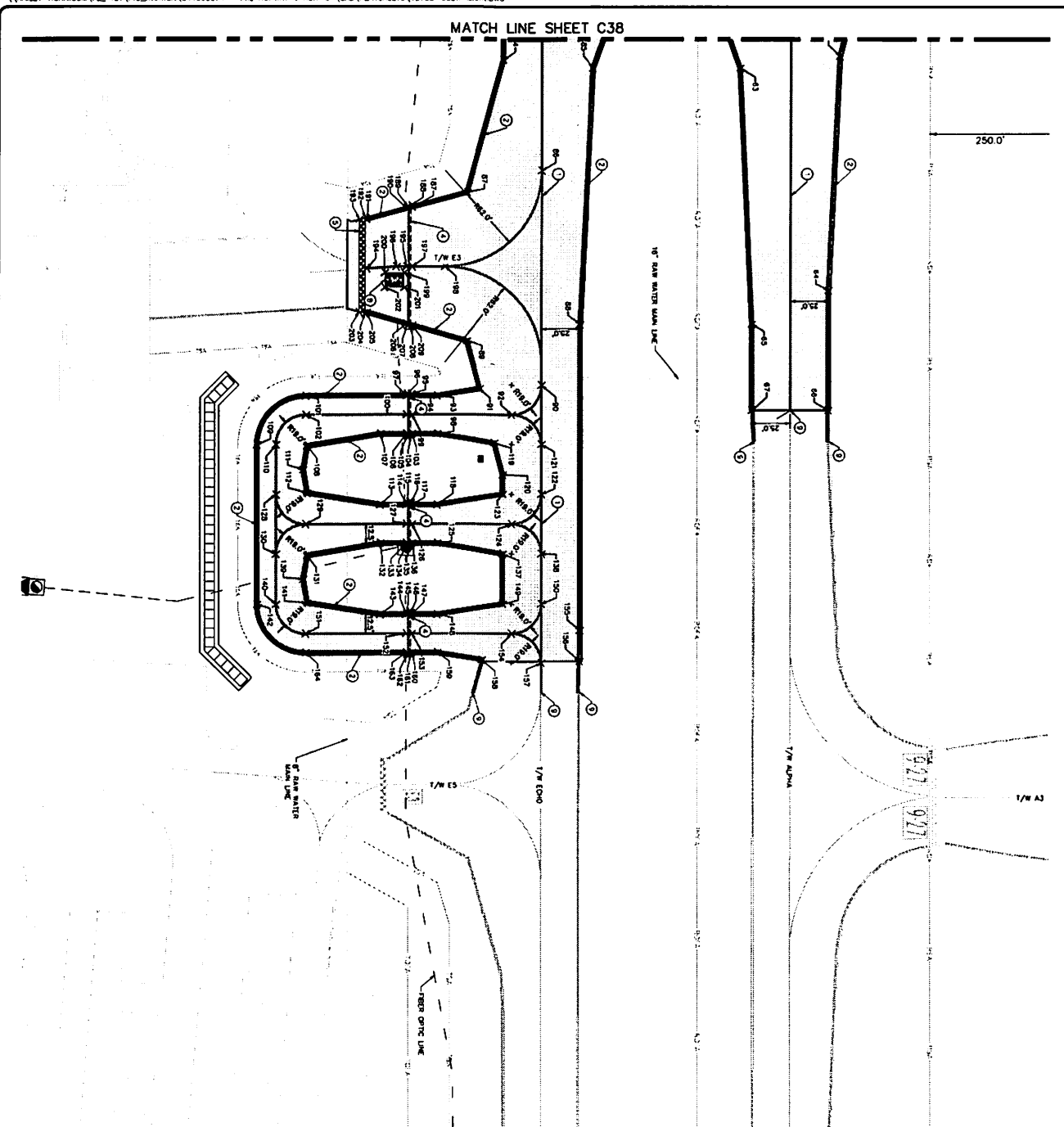
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THOMAS F. O'DONNELL



LEGEND

- 1 FOR SAFETY RETURNED FROM LOCATION. SEE DETAIL SHEETS C40
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NOTES

ON SAVE Y REFERENCE POINT LOCATION, SEE DETAILS, SHEETS C40

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| C39 | |
| TOTAL: | |
| CAD FILE: | |
| 12706-MCA TH | |
| DRAWING FILE: | |
| 4-14-1 | |

**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
PAVEMENT MARKING PLAN**

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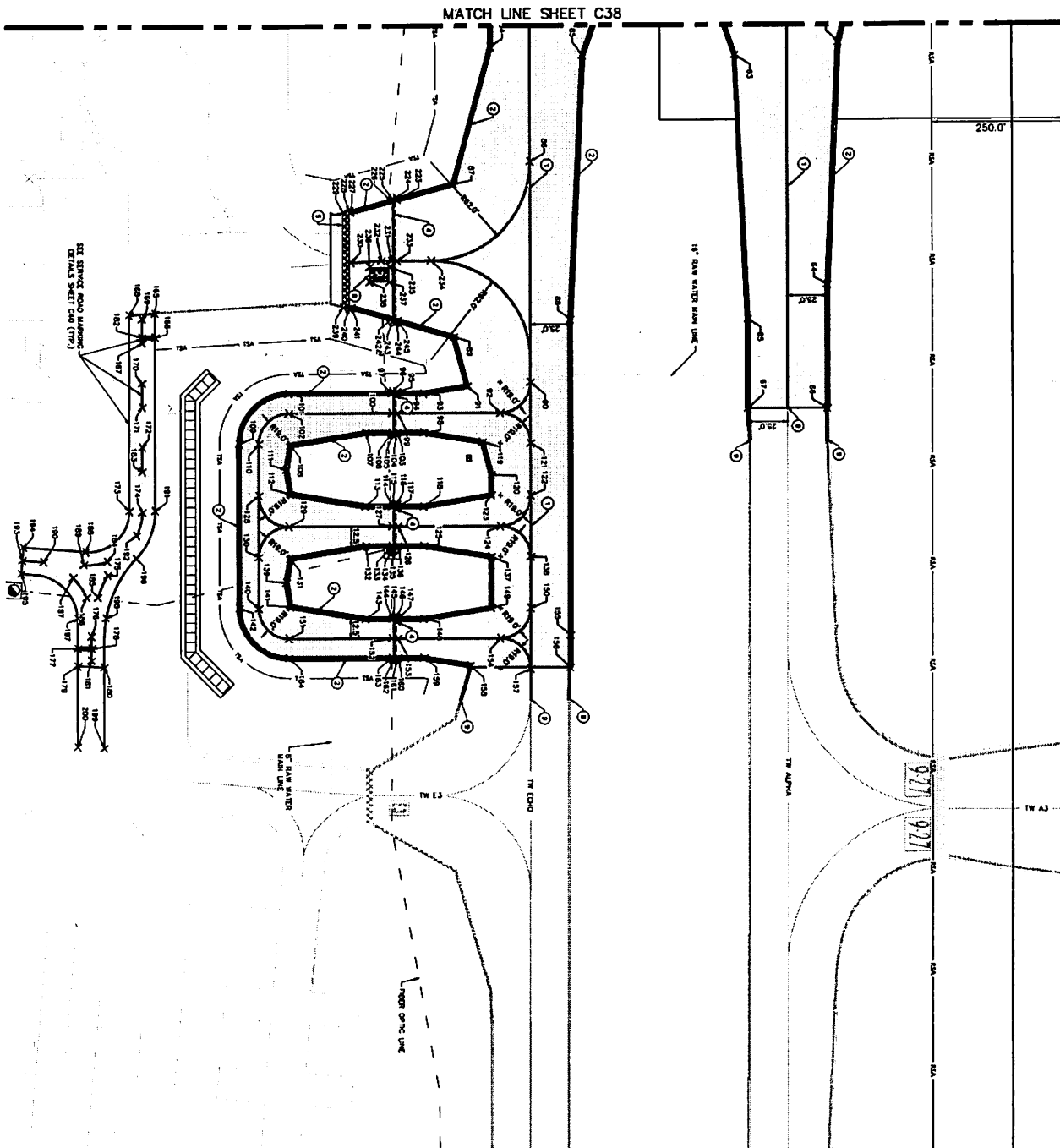
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License No. 62478

THOMAS F.
O'DONNELL



LEGEND

- 1. LIMITS OF NEW PAVEMENT
 - 2. TAXIWAY SAFETY AREA
 - 3. CHANGED TAXIWAY CENTERLINE MARKING, SEE DETAIL SHEET C40
 - 4. TAXIWAY EDGE MARKING, CONTINUOUS, SEE DETAIL SHEET C40
 - 5. NON-DEPENDENT AREA BOUNDARY MARKING, SEE DETAIL SHEET C40
 - 6. APPROX. STRE. MARKING, SURFING FOR INTERMEDIATE HOLD POSITION MARKING, SEE DETAIL SHEET C40
 - 7. SURFACE PAINTED HOLDING POSITION MARKING, SEE DETAIL SHEET C40
 - 8. SURFACE PAINTED TAXIWAY LOCATION, SEE DETAIL SHEET C40
 - 9. MATCH EXISTING STRIPING
- NOTES:
1. FOR SAFETY INTERSECTION POINT LOCATION, SEE DETAIL SHEET C40.

QUANTITY

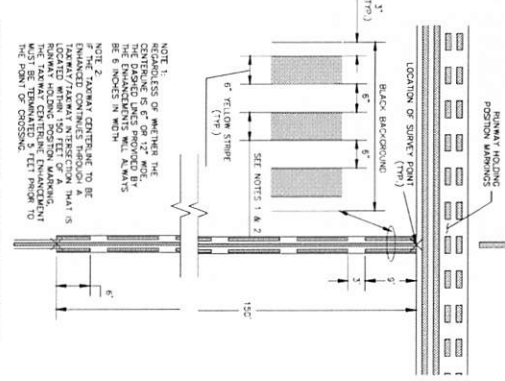
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CALL 48 HOURS BEFORE EXPOSING
FACILITIES 888-88-7872

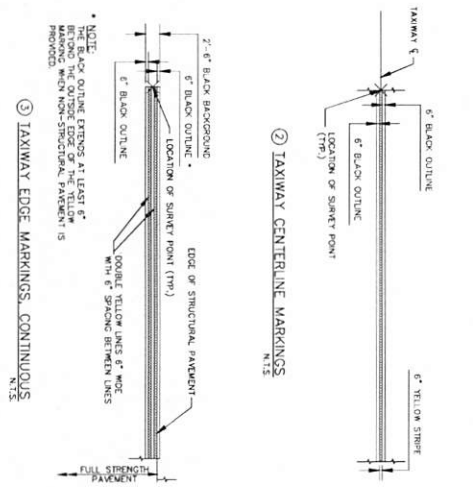
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| <p>PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PAVEMENT MARKING PLAN - ALT 1</p> | <p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | NO | DATE | BY | CHKD | DESCRIPTION | | | | | | | | | | | | | | | | <p>CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING & ARCHITECTURE</p> <p>100 North Andrews Avenue, Fort Lauderdale, Florida 33301</p> | <p>DESIGN BY: AED CHECKED BY: HNS DATE: 05/04/2022 SCALE: AS NOTED FIELD BOOK: 170</p> | <p>State of Florida Professional Engineer License No. 62478</p> <p>THOMAS F. O'DONNELL</p> |
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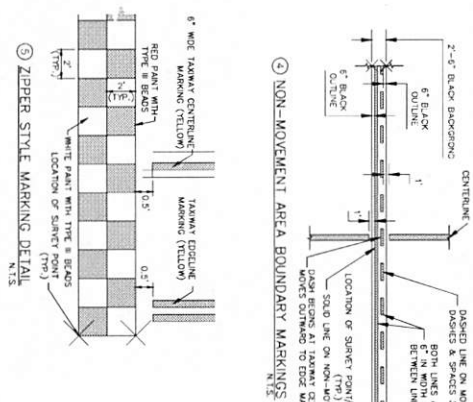
① ENHANCED TAXIWAY CENTRINE MARKING
N.T.S.



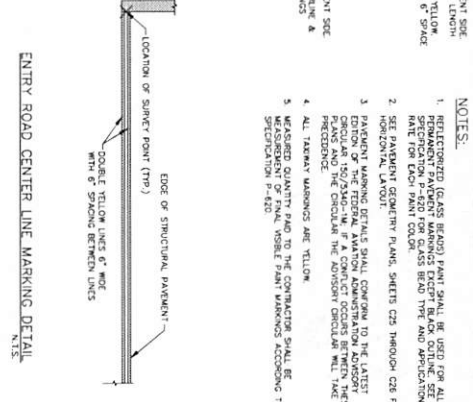
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N.T.S.



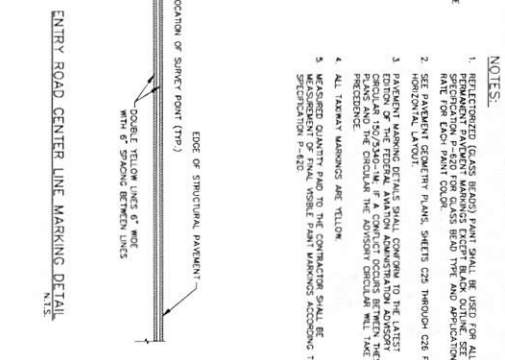
③ TAXIWAY EDGE MARKINGS, CONTINUOUS
N.T.S.



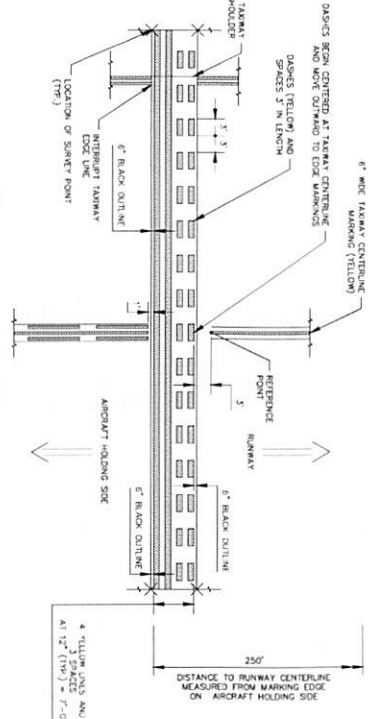
④ ZIPPER STYLE MARKING DETAIL
N.T.S.



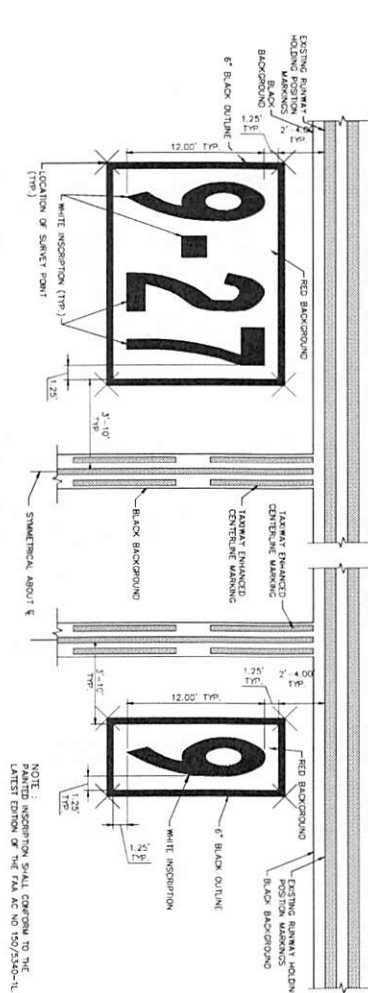
ENTRY ROAD CENTER LINE MARKING DETAIL
N.T.S.



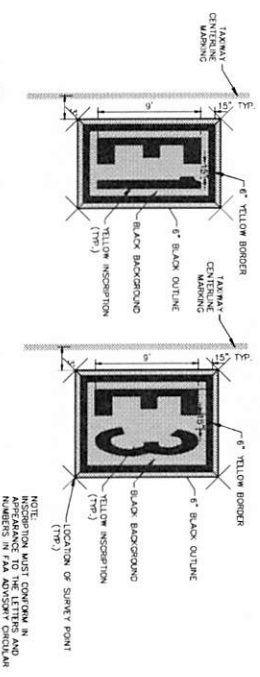
⑤ RUNWAY HOLDING POSITION MARKINGS
N.T.S.



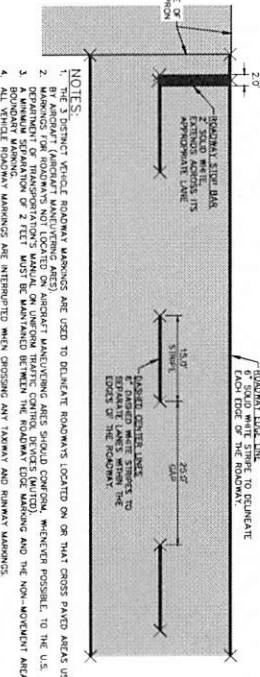
⑥ SURFACE PAINTED HOLDING POSITION SIGN LOCATION DETAIL
N.T.S.



⑦ SURFACE PAINTED TAXIWAY LOCATION SIGN DETAILS
N.T.S.



SERVICE ROAD MARKINGS
N.T.S.



NOTES:

1. REFLECTORIZED GLASS BEADS PAINT SHALL BE USED FOR ALL PERMANENT PAVEMENT MARKINGS EXCEPT BLACK OUTLINE PAINT FOR EACH PAINT COLOR.
2. SET PAVEMENT MARKING PLANS, SHEETS C25 THROUGH C28 FOR HORIZONTAL LAYOUT.
3. PAVEMENT MARKING DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL AID TO NATIONAL HIGHWAYS AND ITS SUPPLEMENTS, AND THE AASHTO ROAD BUILDER'S HANDBOOK, 1994 EDITION.
4. ALL TAXIWAY MARKINGS ARE YELLOW.
5. MATERIALS QUANTITY PAID TO THE CONTRACTOR SHALL BE SPECIFICATION P-420.

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BID SET

| PROJECT # | 12708 |
|--------------------------|---|
| LOCATION | RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS |
| PAVEMENT MARKING DETAILS | |
| DATE | 05/04/2022 |
| BY | KAS |
| CHECKED BY | TTC |
| FIELD BOOK | |

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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

State of Florida
Professional Engineer
License No. 62478
THOMAS F. O'DONNELL

[illegible]

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 | 2116 | 2117 | 2118 | 2119 | 2120 | 2121 | 2122 | 2123 | 2124 | 2125 | 2126 | 2127 | 2128 | 2129 | 2130 | 2131 | 2132 | 2133 | 2134 | 2135 | 2136 | 2137 | 2138 | 2139 | 2140 | 2141 | 2142 | 2143 | 2144 | 2145 | 2146 | 2147 | 2148 | 2149 | 2150 | 2151 | 2152 | 2153 | 2154 | 2155 | 2156 | 2157 | 2158 | 2159 | 2160 | 2161 | 2162 | 2163 | 2164 | 2165 | 2166 | 2167 | 2168 | 2169 | 2170 | 2171 | 2172 | 2173 | 2174 | 2175 | 2176 | 2177 | 2178 | 2179 | 2180 | 2181 | 2182 | 2183 | 2184 | 2185 | 2186 | 2187 | 2188 | 2189 | 2190 | 2191 | 2192 | 2193 | 2194 | 2195 | 2196 | 2197 | 2198 | 2199 | 2200 | 2201 | 2202 | 2203 | 2204 | 2205 | 2206 | 2207 | 2208 | 2209 | 2210 | 2211 | 2212 | 2213 | 2214 | 2215 | 2216 | 2217 | 2218 | 2219 | 2220 | 2221 | 2222 | 2223 | 2224 | 2225 | 2226 | 2227 | 2228 | 2229 | 2230 | 2231 | 2232 | 2233 | 2234 | 2235 | 2236 | 2237 | 2238 | 2239 | 2240 | 2241 | 2242 | 2243 | 2244 | 2245 | 2246 | 2247 | 2248 | 2249 | 2250 | 2251 | 2252 | 2253 | 2254 | 2255 | 2256 | 2257 | 2258 | 2259 | 2260 | 2261 | 2262 | 2263 | 2264 | 2265 | 2266 | 2267 | 2268 | 2269 | 2270 | 2271 | 2272 | 2273 | 2274 | 2275 | 2276 | 2277 | 2278 | 2279 | 2280 | 2281 | 2282 | 2283 | 2284 | 2285 | 2286 | 2287 | 2288 | 2289 | 2290 | 2291 | 2292 | 2293 | 2294 | 2295 | 2296 | 2297 | 2298 | 2299 | 2300 | 2301 | 2302 | 2303 | 2304 | 2305 | 2306 | 2307 | 2308 | 2309 | 2310 | 2311 | 2312 | 2313 | 2314 | 2315 | 2316 | 2317 | 2318 | 2319 | 2320 | 2321 | 2322 | 2323 | 2324 | 2325 | 2326 | 2327 | 2328 | 2329 | 2330 | 2331 | 2332 | 2333 | 2334 | 2335 | 2336 | 2337 | 2338 | 2339 | 2340 | 2341 | 2342 | 2343 | 2344 | 2345 | 2346 | 2347 | 2348 | 2349 | 2350 | 2351 | 2352 | 2353 | 2354 | 2355 | 2356 | 2357 | 2358 | 2359 | 2360 | 2361 | 2362 | 2363 | 2364 | 2365 | 2366 | 2367 | 2368 | 2369 | 2370 | 2371 | 2372 | 2373 | 2374 | 2375 | 2376 | 2377 | 2378 | 2379 | 2380 | 2381 | 2382 | 2383 | 2384 | 2385 | 2386 | 2387 | 2388 | 2389 | 2390 | 2391 | 2392 | 2393 | 2394 | 2395 | 2396 | 2397 | 2398 | 2399 | 2400 | 2401 | 2402 | 2403 | 2404 | 2405 | 2406 | 2407 | 2408 | 2409 | 2410 | 2411 | 2412 | 2413 | 2414 | 2415 | 2416 | 2417 | 2418 | 2419 | 2420 | 2421 | 2422 | 2423 | 2424 | 2425 | 2426 | 2427 | 2428 | 2429 | 2430 | 2431 | 2432 | 2433 | 2434 | 2435 | 2436 | 2437 | 2438 | 2439 | 2440 | 2441 | 2442 | 2443 | 2444 | 2445 | 2446 | 2447 | 2448 | 2449 | 2450 | 2451 | 2452 | 2453 | 2454 | 2455 | 2456 | 2457 | 2458 | 2459 | 2460 | 2461 | 2462 | 2463 | 2464 | 2465 | 2466 | 2467 | 2468 | 2469 | 2470 | 2471 | 2472 | 2473 | 2474 | 2475 | 2476 | 2477 | 2478 | 2479 | 2480 | 2481 | 2482 | 2483 | 2484 | 2485 | 2486 | 2487 | 2488 | 2489 | 2490 | 2491 | 2492 | 2493 | 2494 | 2495 | 2496 | 2497 | 2498 | 2499 | 2500 | 2501 | 2502 | 2503 | 2504 | 2505 | 2506 | 2507 | 2508 | 2509 | 2510 | 2511 | 2512 | 2513 | 2514 | 2515 | 2516 | 2517 | 2518 | 2519 | 2520 | 2521 | 2522 | 2523 | 2524 | 2525 | 2526 | 2527 | 2528 | 2529 | 2530 | 2531 | 2532 | 2533 | 2534 | 2535 | 2536 | 2537 | 2538 | 2539 | 2540 | 2541 | 2542 | 2543 | 2544 | 2545 | 2546 | 2547 | 2548 | 2549 | 2550 | 2551 | 2552 | 2553 | 2554 | 2555 | 2556 | 2557 | 2558 | 2559 | 2560 | 2561 | 2562 | 2563 | 2564 | 2565 | 2566 | 2567 | 2568 | 2569 | 2570 | 2571 | 2572 | 2573 | 2574 | 2575 | 2576 | 2577 | 2578 | 2579 | 2580 | 2581 | 2582 | 2583 | 2584 | 2585 | 2586 | 2587 | 2588 | 2589 | 2590 | 2591 | 2592 | 2593 | 2594 | 2595 | 2596 | 2597 | 2598 | 2599 | 2600 | 2601 | 2602 | 2603 | 2604 | 2605 | 2606 | 2607 | 2608 | 2609 | 2610 | 2611 | 2612 | 2613 | 2614 | 2615 | 2616 | 2617 | 2618 | 2619 | 2620 | 2621 | 2622 | 2623 | 2624 | 2625 | 2626 | 2627 | 2628 | 2629 | 2630 | 2631 | 2632 | 2633 | 2634 | 2635 | 2636 | 2637 | 2638 | 2639 | 2640 | 2641 | 2642 | 2643 | 2644 | 2645 | 2646 | 2647 | 2648 | 2649 | 2650 | 2651 | 2652 | 2653 | 2654 | 2655 | 2656 | 2657 | 2658 | 2659 | 2660 | 2661 | 2662 | 2663 | 2664 | 2665 | 2666 | 2667 | 2668 | 2669 | 2670 | 2671 | 2672 | 2673 | 2674 | 2675 | 2676 | 2677 | 2678 | 2679 | 2680 | 2681 | 2682 | 2683 | 2684 | 2685 | 2686 | 2687 | 2688 | 2689 | 2690 | 2691 | 2692 | 2693 | 2694 | 2695 | 2696 | 2697 | 2698 | 2699 | 2700 | 2701 | 2702 | 2703 | 2704 | 2705 | 2706 | 2707 | 2708 | 2709 | 2710 | 2711 | 2712 | 2713 | 2714 | 2715 | 2716 | 2717 | 2718 | 2719 | 2720 | 2721 | 2722 | 2723 | 2724 | 2725 | 2726 | 2727 | 2728 | 2729 | 2730 | 2731 | 2732 | 2733 | 2734 | 2735 | 2736 | 2737 | 2738 | 2739 | 2740 | 2741 | 2742 | 2743 | 2744 | 2745 | 2746 | 2747 | 2748 | 2749 | 2750 | 2751 | 2752 | 2753 | 2754 | 2755 | 2756 | 2757 | 2758 | 2759 | 2760 | 2761 | 2762 | 2763 | 2764 | 2765 | 2766 | 2767 | 2768 | 2769 | 2770 | 2771 | 2772 | 2773 | 2774 | 2775 | 2776 | 2777 | 2778 | 2779 | 2780 | 2781 | 2782 | 2783 | 2784 | 2785 | 2786 | 2787 | 2788 | 2789 | 2790 | 2791 | 2792 | 2793 | 2794 | 2795 | 2796 | 2797 | 2798 | 2799 | 2800 | 2801 | 2802 | 2803 | 2804 | 2805 | 2806 | 2807 | 2808 | 2809 | 2810 | 2811 | 2812 | 2813 | 2814 | 2815 | 2816 | 2817 | 2818 | 2819 | 2820 | 2821 | 2822 | 2823 | 2824 | 2825 | 2826 | 2827 | 2828 | 2829 | 2830 | 2831 | 2832 | 2833 | 2834 | 2835 | 2836 | 2837 | 2838 | 2839 | 2840 | 2841 | 2842 | 2843 | 2844 | 2845 | 2846 | 2847 | 2848 | 2849 | 2850 | 2851 | 2852 | 2853 | 2854 | 2855 | 2856 | 2857 | 2858 | 2859 | 2860 | 2861 | 2862 | 2863 | 2864 | 2865 | 2866 | 2867 | 2868 | 2869 | 2870 | 2871 | 2872 | 2873 | 2874 | 2875 | 2876 | 2877 | 2878 | 2879 | 2880 | 2881 | 2882 | 2883 | 2884 | 2885 | 2886 | 2887 | 2888 | 2889 | 2890 | 2891 | 2892 | 2893 | 2894 | 2895 | 2896 | 2897 | 2898 | 2899 | 2900 | 2901 | 2902 | 2903 | 2904 | 2905 | 2906 | 2907 | 2908 | 2909 | 2910 | 2911 | 2912 | 2913 | 2914 | 2915 | 2916 | 2917 | 2918 | 2919 | 2920 | 2921 | 2922 | 2923 | 2924 | 2925 | 2926 | 2927 | 2928 | 2929 | 2930 | 2931 | 2932 | 2933 | 2934 | 2935 | 2936 | 2937 | 2938 | 2939 | 2940 | 2941 | 2942 | 2943 | 2944 | 2945 | 2946 | 2947 | 2948 | 2949 | 2950 | 2951 | 2952 | 2953 | 2954 | 2955 | 2956 | 2957 | 2958 | 2959 | 2960 | 2961 | 2962 | 2963 | 2964 | 2965 | 2966 | 2967 | 2968 | 2969 | 2970 | 2971 | 2972 | 2973 | 2974 | 2975 | 2976 | 2977 | 2978 | 2979 | 2980 | 2981 | 2982 | 2983 | 2984 | 2985 | 2986 | 2987 | 2988 | 2989 | 2990 | 2991 | 2992 | 2993 | 2994 | 2995 | 2996 | 2997 | 2998 | 2999 | 3000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-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| 117 | PI | 4000.14 | 81.007 | |
| 118 | PI | 3994.83 | 81.007 | |
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| 180 | PI | 3994.83 | 81.007 | |
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| 182 | PI | 3994.83 | 81.007 | |
| 183 | PI | 4000.14 | 81.007 | |
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| 199 | PI | 4000.14 | 81.007 | |
| 200 | PI | 3994.83 | 81.007 | |

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| 404 | PT | 60: | | |

| TAVANNA ALUMNI 15 BARRING COORDINATORS | | | |
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| Panel | Alumni | Students | Others |
| 1 | PT | 6:15-8:15 | |
| 2 | PT | 8:15-10:15 | |
| 3 | PT | 10:15-12:15 | |
| 4 | PT | 12:15-2:15 | |
| 5 | PT | 2:15-4:15 | |
| 6 | PT | 4:15-6:15 | |
| 7 | PT | 6:15-8:15 | |
| 8 | PT | 8:15-10:15 | |
| 9 | PT | 10:15-12:15 | |
| 10 | PT | 12:15-2:15 | |
| 11 | PT | 2:15-4:15 | |
| 12 | PT | 4:15-6:15 | |
| 13 | PT | 6:15-8:15 | |
| 14 | PT | 8:15-10:15 | |
| 15 | PT | 10:15-12:15 | |
| 16 | PT | 12:15-2:15 | |
| 17 | PT | 2:15-4:15 | |
| 18 | PT | 4:15-6:15 | |
| 19 | PT | 6:15-8:15 | |
| 20 | PT | 8:15-10:15 | |

| TANJAVI TAMIL & MADHURU COMPOUNDS | | | |
|-----------------------------------|-----------|-------|--------|
| Index | Therapies | Index | Others |
| 1 | Pr | Pr | Pr |
| 2 | Pr | Pr | Pr |
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| 4 | Pr | Pr | Pr |
| 5 | Pr | Pr | Pr |
| 6 | Pr | Pr | Pr |
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| 48 | Pr | Pr | Pr |
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| 51 | Pr | Pr | Pr |
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| 91 | Pr | Pr | Pr |
| 92 | Pr | Pr | Pr |
| 93 | Pr | Pr | Pr |
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| 95 | Pr | Pr | Pr |
| 96 | Pr | Pr | Pr |
| 97 | Pr | Pr | Pr |
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| 99 | Pr | Pr | Pr |
| 100 | Pr | Pr | Pr |

| Rank | Country (a) | Median | Q1 | Q3 |
|------|-------------|--------|--------|--------|
| 1 | USA | 41.500 | 39.250 | 43.750 |
| 2 | GER | 41.500 | 39.250 | 43.750 |
| 3 | ITA | 41.500 | 39.250 | 43.750 |
| 4 | ESP | 41.500 | 39.250 | 43.750 |
| 5 | FRA | 41.500 | 39.250 | 43.750 |
| 6 | GBR | 41.500 | 39.250 | 43.750 |
| 7 | FIN | 41.500 | 39.250 | 43.750 |
| 8 | CAN | 41.500 | 39.250 | 43.750 |
| 9 | URS | 41.500 | 39.250 | 43.750 |
| 10 | URS | 41.500 | 39.250 | 43.750 |
| 11 | URS | 41.500 | 39.250 | 43.750 |
| 12 | URS | 41.500 | 39.250 | 43.750 |
| 13 | URS | 41.500 | 39.250 | 43.750 |
| 14 | URS | 41.500 | 39.250 | 43.750 |
| 15 | URS | 41.500 | 39.250 | 43.750 |
| 16 | URS | 41.500 | 39.250 | 43.750 |
| 17 | URS | 41.500 | 39.250 | 43.750 |
| 18 | URS | 41.500 | 39.250 | 43.750 |
| 19 | URS | 41.500 | 39.250 | 43.750 |
| 20 | URS | 41.500 | 39.250 | 43.750 |
| 21 | URS | 41.500 | 39.250 | 43.750 |
| 22 | URS | 41.500 | 39.250 | 43.750 |
| 23 | URS | 41.500 | 39.250 | 43.750 |
| 24 | URS | 41.500 | 39.250 | 43.750 |
| 25 | URS | 41.500 | 39.250 | 43.750 |
| 26 | URS | 41.500 | 39.250 | 43.750 |
| 27 | URS | 41.500 | 39.250 | 43.750 |
| 28 | URS | 41.500 | 39.250 | 43.750 |
| 29 | URS | 41.500 | 39.250 | 43.750 |
| 30 | URS | 41.500 | 39.250 | 43.750 |
| 31 | URS | 41.500 | 39.250 | 43.750 |
| 32 | URS | 41.500 | 39.250 | 43.750 |
| 33 | URS | 41.500 | 39.250 | 43.750 |
| 34 | URS | 41.500 | 39.250 | 43.750 |
| 35 | URS | 41.500 | 39.250 | 43.750 |
| 36 | URS | 41.500 | 39.250 | 43.750 |
| 37 | URS | 41.500 | 39.250 | 43.750 |
| 38 | URS | 41.500 | 39.250 | 43.750 |
| 39 | URS | 41.500 | 39.250 | 43.750 |
| 40 | URS | 41.500 | 39.250 | 43.750 |
| 41 | URS | 41.500 | 39.250 | 43.750 |
| 42 | URS | 41.500 | 39.250 | 43.750 |
| 43 | URS | 41.500 | 39.250 | 43.750 |
| 44 | URS | 41.500 | 39.250 | 43.750 |
| 45 | URS | 41.500 | 39.250 | 43.750 |
| 46 | URS | 41.500 | 39.250 | 43.750 |
| 47 | URS | 41.500 | 39.250 | 43.750 |
| 48 | URS | 41.500 | 39.250 | 43.750 |
| 49 | URS | 41.500 | 39.250 | 43.750 |
| 50 | URS | 41.500 | 39.250 | 43.750 |
| 51 | URS | 41.500 | 39.250 | 43.750 |
| 52 | URS | 41.500 | 39.250 | 43.750 |
| 53 | URS | 41.500 | 39.250 | 43.750 |
| 54 | URS | 41.500 | 39.250 | 43.750 |
| 55 | URS | 41.500 | 39.250 | 43.750 |
| 56 | URS | 41.500 | 39.250 | 43.750 |
| 57 | URS | 41.500 | 39.250 | 43.750 |
| 58 | URS | 41.500 | 39.250 | 43.750 |
| 59 | URS | 41.500 | 39.250 | 43.750 |
| 60 | URS | 41.500 | 39.250 | 43.750 |
| 61 | URS | 41.500 | 39.250 | 43.750 |
| 62 | URS | 41.500 | 39.250 | 43.750 |
| 63 | URS | 41.500 | 39.250 | 43.750 |
| 64 | URS | 41.500 | 39.250 | 43.750 |
| 65 | URS | 41.500 | 39.250 | 43.750 |
| 66 | URS | 41.500 | 39.250 | 43.750 |
| 67 | URS | 41.500 | 39.250 | 43.750 |
| 68 | URS | 41.500 | 39.250 | 43.750 |
| 69 | URS | 41.500 | 39.250 | 43.750 |
| 70 | URS | 41.500 | 39.250 | 43.750 |
| 71 | URS | 41.500 | 39.250 | 43.750 |
| 72 | URS | 41.500 | 39.250 | 43.750 |
| 73 | URS | 41.500 | 39.250 | 43.750 |
| 74 | URS | 41.500 | 39.250 | 43.750 |
| 75 | URS | 41.500 | 39.250 | 43.750 |
| 76 | URS | 41.500 | 39.250 | 43.750 |
| 77 | URS | 41.500 | 39.250 | 43.750 |
| 78 | URS | 41.500 | 39.250 | 43.7 |

| TOWNSHIP RECORD MAINTENANCE COMMITTEE | | | | |
|---------------------------------------|---------------|----------|---------|---------|
| Meeting | Meeting Dates | Minutes | Agenda | Minutes |
| 1 | 7/1 | 7/1/20 | 11:00am | |
| 2 | 7/8 | 7/8/20 | 11:00am | |
| 3 | 7/15 | 7/15/20 | 11:00am | |
| 4 | 7/22 | 7/22/20 | 11:00am | |
| 5 | 7/29 | 7/29/20 | 11:00am | |
| 6 | 8/5 | 8/5/20 | 11:00am | |
| 7 | 8/12 | 8/12/20 | 11:00am | |
| 8 | 8/19 | 8/19/20 | 11:00am | |
| 9 | 8/26 | 8/26/20 | 11:00am | |
| 10 | 9/2 | 9/2/20 | 11:00am | |
| 11 | 9/9 | 9/9/20 | 11:00am | |
| 12 | 9/16 | 9/16/20 | 11:00am | |
| 13 | 9/23 | 9/23/20 | 11:00am | |
| 14 | 9/30 | 9/30/20 | 11:00am | |
| 15 | 10/7 | 10/7/20 | 11:00am | |
| 16 | 10/14 | 10/14/20 | 11:00am | |
| 17 | 10/21 | 10/21/20 | 11:00am | |
| 18 | 10/28 | 10/28/20 | 11:00am | |
| 19 | 11/4 | 11/4/20 | 11:00am | |
| 20 | 11/11 | 11/11/20 | 11:00am | |
| 21 | 11/18 | 11/18/20 | 11:00am | |
| 22 | 11/25 | 11/25/20 | 11:00am | |
| 23 | 12/2 | 12/2/20 | 11:00am | |
| 24 | 12/9 | 12/9/20 | 11:00am | |
| 25 | 12/16 | 12/16/20 | 11:00am | |
| 26 | 12/23 | 12/23/20 | 11:00am | |
| 27 | 12/30 | 12/30/20 | 11:00am | |
| 28 | 1/6 | 1/6/21 | 11:00am | |
| 29 | 1/13 | 1/13/21 | 11:00am | |
| 30 | 1/20 | 1/20/21 | 11:00am | |

NOTE:
DATUM MAD63 WAS UTILIZED TO DETERMINE COORDINATE LOCATION



**CALL 48 HOURS
BEFORE YOU DIG**

IT'S THE LAW:
CALL 811

Know what's below?
Call before you dig.

Available 24/7: 800 CALL 811 or 1-800-4-A-DIGIT, Inc.

**CALL 48 HOURS BEFORE DIGGING
FOR FACILITIES 854-556-7312**

Ready-to-dig
Cotton & Macdonald, Inc.
10000 Highway 101, Suite 100
Houston, TX 77036
800-481-8111

QUANTUM
10000 Highway 101, Suite 100
Houston, TX 77036
1-800-481-8111

BID SET

| | |
|---|----------|
| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PAVEMENT MARKING COORDINATES | |
| SHEET NO C41 | OF 36 |
| TOTAL 36 | |
| CAD FILE 12708-Mkt-11-WA-MK | |
| DRAWING TITLE NO 4-143-00 | |

[illegible]

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|--------------|------------|
| DEATH BY: | DATE: |
| ALB | 05/04/2022 |
| DESIGNED BY: | SCALE: |
| KAS | AS NOTED |
| CHECKED BY: | |
| TFO | |
| FIELD BOOK | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL

| Point | Description | Station | Offset |
|-------|-------------|---------|--------|
| 1 | PC | 3+12.57 | 71.02 |
| 2 | PT | 3+12.57 | 60.00 |
| 3 | PC | 3+14.36 | 1.88 |
| 4 | PT | 3+14.36 | 0.38 |
| 5 | PC | 3+15.02 | 0.38 |
| 6 | PT | 3+15.02 | 39.78 |
| 7 | PC | 3+15.02 | 0.00 |
| 8 | PT | 3+15.02 | 39.78 |
| 9 | PC | 3+16.07 | 1.81 |
| 10 | PT | 3+16.07 | 0.00 |
| 11 | PC | 3+17.00 | 0.00 |
| 12 | PT | 3+17.00 | 39.78 |
| 13 | PC | 3+18.13 | 1.88 |
| 14 | PT | 3+18.13 | 72.02 |
| 15 | PC | 3+19.02 | 0.00 |
| 16 | PT | 3+19.02 | 4.00 |
| 17 | PC | 3+19.39 | 1.88 |
| 18 | PT | 3+19.39 | 0.38 |
| 19 | PC | 3+20.34 | 0.38 |
| 20 | PT | 3+20.34 | 39.78 |
| 21 | PC | 3+20.34 | 0.00 |
| 22 | PT | 3+20.34 | 0.00 |
| 23 | PC | 3+21.81 | 1.88 |
| 24 | PT | 3+21.81 | 72.02 |
| 25 | PC | 3+23.02 | 0.00 |
| 26 | PT | 3+23.02 | 4.00 |
| 27 | PC | 3+24.39 | 1.88 |
| 28 | PT | 3+24.39 | 0.38 |
| 29 | PC | 3+25.34 | 0.38 |
| 30 | PT | 3+25.34 | 39.78 |
| 31 | PC | 3+26.34 | 0.00 |
| 32 | PT | 3+26.34 | 0.00 |
| 33 | PC | 3+27.81 | 1.88 |
| 34 | PT | 3+27.81 | 72.02 |
| 35 | PC | 3+29.02 | 0.00 |
| 36 | PT | 3+29.02 | 4.00 |
| 37 | PC | 3+30.39 | 1.88 |
| 38 | PT | 3+30.39 | 0.38 |
| 39 | PC | 3+31.34 | 0.38 |
| 40 | PT | 3+31.34 | 39.78 |
| 41 | PC | 3+32.34 | 0.00 |
| 42 | PT | 3+32.34 | 0.00 |
| 43 | PC | 3+33.81 | 1.88 |
| 44 | PT | 3+33.81 | 72.02 |
| 45 | PC | 3+35.02 | 0.00 |
| 46 | PT | 3+35.02 | 4.00 |
| 47 | PC | 3+36.39 | 1.88 |
| 48 | PT | 3+36.39 | 0.38 |
| 49 | PC | 3+37.34 | 0.38 |
| 50 | PT | 3+37.34 | 39.78 |
| 51 | PC | 3+38.34 | 0.00 |
| 52 | PT | 3+38.34 | 0.00 |
| 53 | PC | 3+39.81 | 1.88 |
| 54 | PT | 3+39.81 | 72.02 |
| 55 | PC | 3+41.02 | 0.00 |
| 56 | PT | 3+41.02 | 4.00 |
| 57 | PC | 3+42.39 | 1.88 |
| 58 | PT | 3+42.39 | 0.38 |
| 59 | PC | 3+43.34 | 0.38 |
| 60 | PT | 3+43.34 | 39.78 |
| 61 | PC | 3+44.34 | 0.00 |
| 62 | PT | 3+44.34 | 0.00 |
| 63 | PC | 3+45.81 | 1.88 |
| 64 | PT | 3+45.81 | 72.02 |
| 65 | PC | 3+47.02 | 0.00 |
| 66 | PT | 3+47.02 | 4.00 |
| 67 | PC | 3+48.39 | 1.88 |
| 68 | PT | 3+48.39 | 0.38 |
| 69 | PC | 3+49.34 | 0.38 |
| 70 | PT | 3+49.34 | 39.78 |
| 71 | PC | 3+50.34 | 0.00 |
| 72 | PT | 3+50.34 | 0.00 |
| 73 | PC | 3+51.81 | 1.88 |
| 74 | PT | 3+51.81 | 72.02 |
| 75 | PC | 3+53.02 | 0.00 |
| 76 | PT | 3+53.02 | 4.00 |
| 77 | PC | 3+54.39 | 1.88 |
| 78 | PT | 3+54.39 | 0.38 |
| 79 | PC | 3+55.34 | 0.38 |
| 80 | PT | 3+55.34 | 39.78 |
| 81 | PC | 3+56.34 | 0.00 |
| 82 | PT | 3+56.34 | 0.00 |
| 83 | PC | 3+57.81 | 1.88 |
| 84 | PT | 3+57.81 | 72.02 |
| 85 | PC | 3+59.02 | 0.00 |
| 86 | PT | 3+59.02 | 4.00 |
| 87 | PC | 3+60.39 | 1.88 |
| 88 | PT | 3+60.39 | 0.38 |
| 89 | PC | 3+61.34 | 0.38 |
| 90 | PT | 3+61.34 | 39.78 |
| 91 | PC | 3+62.34 | 0.00 |
| 92 | PT | 3+62.34 | 0.00 |
| 93 | PC | 3+63.81 | 1.88 |
| 94 | PT | 3+63.81 | 72.02 |
| 95 | PC | 3+65.02 | 0.00 |
| 96 | PT | 3+65.02 | 4.00 |
| 97 | PC | 3+66.39 | 1.88 |
| 98 | PT | 3+66.39 | 0.38 |
| 99 | PC | 3+67.34 | 0.38 |
| 100 | PT | 3+67.34 | 39.78 |

| | Index | Employment | Salaries | Others |
|----|-------|------------|----------|--------|
| 66 | PC | 31403.57 | 24.115 | |
| 67 | PC | 31412.57 | 7.7200 | |
| 70 | PC | 31417.58 | 1.8972 | |
| 71 | PC | 31418.53 | 5.9316 | |
| 72 | PC | 31418.53 | 6.9316 | |
| 73 | PC | 31418.53 | 8.4211 | |
| 74 | PC | 31427.07 | | |
| 75 | PC | 31433.31 | 28.9196 | |
| 76 | PC | 31444.63 | 6.7651 | |
| 77 | PC | 31455.95 | 6.0000 | |
| 78 | PC | 31456.96 | 5.9835 | |
| 79 | PC | 31456.96 | 5.9835 | |
| 80 | PC | 31470.31 | 12.7457 | |
| 81 | PC | 31470.31 | 7.2020 | |
| 82 | PC | 31464.16 | 5.9835 | |
| 83 | PC | 31464.16 | 5.9835 | |
| 84 | PC | 31471.31 | 21.7457 | |
| 85 | PC | 31471.31 | 12.7457 | |
| 86 | PC | 31474.50 | 6.0007 | |
| 87 | PC | 31474.50 | 6.7851 | |
| 88 | PC | 31484.50 | 7.6177 | |
| 89 | PC | 31474.50 | 6.7851 | |
| 90 | PC | 31471.31 | 6.0007 | |
| 91 | PC | 31471.31 | 7.6167 | |
| 92 | PC | 31474.50 | 11.0007 | |
| 93 | PC | 31474.50 | 6.6411 | |

[illegible][illegible]

| | | | |
|-----|----|---------|---------|
| 149 | PC | 0043.17 | 24.767 |
| 150 | PC | 0043.19 | 0.007 |
| 151 | PC | 0043.19 | 111.005 |
| 152 | PC | 0043.19 | 84.567 |
| 153 | PC | 0043.19 | 81.007 |
| 154 | PC | 0043.19 | 17.007 |
| 155 | PC | 0043.20 | -74.848 |
| 156 | PC | 0043.20 | -74.848 |
| 157 | PC | 0043.20 | 0.007 |
| 158 | PC | 0043.24 | 0.007 |
| 159 | PC | 0043.64 | 64.811 |
| 160 | PC | 0043.64 | 81.007 |
| 161 | PC | 0043.29 | 81.007 |
| 162 | PC | 0043.64 | 84.007 |
| 163 | PC | 0043.64 | 85.007 |
| 164 | PC | 0043.64 | 151.005 |
| 165 | PC | 0043.64 | 224.911 |
| 166 | PC | 0043.64 | 224.911 |
| 167 | PC | 0043.64 | 262.841 |
| 168 | PC | 0043.64 | 262.841 |
| 169 | PC | 0043.64 | 262.841 |
| 170 | PC | 0043.64 | 262.841 |
| 171 | PC | 0043.64 | 262.841 |
| 172 | PC | 0043.64 | 262.841 |
| 173 | PC | 0043.64 | 262.841 |
| 174 | PC | 0043.64 | 262.841 |
| 175 | PC | 0043.64 | 262.841 |
| 176 | PC | 0043.64 | 262.841 |
| 177 | PC | 0043.64 | 262.841 |
| 178 | PC | 0043.64 | 262.841 |
| 179 | PC | 0043.64 | 262.841 |
| 180 | PC | 0043.64 | 262.841 |
| 181 | PC | 0043.64 | 262.841 |
| 182 | PC | 0043.64 | 262.841 |
| 183 | PC | 0043.64 | 262.841 |
| 184 | PC | 0043.64 | 262.841 |
| 185 | PC | 0043.64 | 262.841 |
| 186 | PC | 0043.64 | 262.841 |
| 187 | PC | 0043.64 | 262.841 |
| 188 | PC | 0043.64 | 262.841 |
| 189 | PC | 0043.64 | 262.841 |
| 190 | PC | 0043.64 | 262.841 |
| 191 | PC | 0043.64 | 262.841 |
| 192 | PC | 0043.64 | 262.841 |
| 193 | PC | 0043.64 | 262.841 |
| 194 | PC | 0043.64 | 262.841 |
| 195 | PC | 0043.64 | 262.841 |
| 196 | PC | 0043.64 | 262.841 |
| 197 | PC | 0043.64 | 262.841 |
| 198 | PC | 0043.64 | 262.841 |
| 199 | PC | 0043.64 | 262.841 |
| 200 | PC | 0043.64 | 262.841 |
| 201 | PC | 0043.64 | 262.841 |
| 202 | PC | 0043.64 | 262.841 |
| 203 | PC | 0043.64 | 262.841 |
| 204 | PC | 0043.64 | 262.841 |
| 205 | PC | 0043.64 | 262.841 |
| 206 | PC | 0043.64 | 262.841 |
| 207 | PC | 0043.64 | 262.841 |
| 208 | PC | 0043.64 | 262.841 |
| 209 | PC | 0043.64 | 262.841 |
| 210 | PC | 0043.64 | 262.841 |
| 211 | PC | 0043.64 | 262.841 |
| 212 | PC | 0043.64 | 262.841 |
| 213 | PC | 0043.64 | 262.841 |
| 214 | PC | 0043.15 | 124.957 |

| | | | | |
|-----|----|----------|-----------|----|
| 176 | PC | 40-04-17 | 214.71.71 | 21 |
| 177 | PC | 40-04-17 | 214.71.71 | 21 |
| 178 | PC | 40-04-13 | 214.94.32 | 21 |
| 179 | PC | 40-09-07 | 214.71.71 | 21 |
| 180 | PC | 40-09-11 | 214.64.32 | 21 |
| 181 | PC | 40-05-17 | 214.71.71 | 21 |
| 182 | PC | 18-04-09 | 214.61.01 | 21 |
| 183 | PC | 40-04-15 | 214.61.01 | 21 |
| 184 | PC | 40-04-15 | 214.61.01 | 21 |
| 185 | PC | 40-04-15 | 214.61.01 | 21 |
| 186 | PC | 40-04-15 | 214.61.01 | 21 |
| 187 | PC | 40-02-26 | 214.61.01 | 21 |
| 188 | PC | 40-02-26 | 214.61.01 | 21 |
| 189 | PC | 40-02-26 | 214.61.01 | 21 |
| 190 | PC | 40-02-26 | 214.61.01 | 21 |
| 191 | PC | 40-02-26 | 214.61.01 | 21 |
| 192 | PC | 40-02-26 | 214.61.01 | 21 |
| 193 | PC | 40-02-26 | 214.61.01 | 21 |
| 194 | PC | 40-02-26 | 214.61.01 | 21 |
| 195 | PC | 40-02-26 | 214.61.01 | 21 |
| 196 | PC | 40-02-26 | 214.61.01 | 21 |
| 197 | PC | 40-02-26 | 214.61.01 | 21 |
| 198 | PC | 40-02-26 | 214.61.01 | 21 |
| 199 | PC | 40-02-26 | 214.61.01 | 21 |
| 200 | PC | 40-02-26 | 214.61.01 | 21 |

| TUMVALUATION: 1. LAMINATING COMPONENTS | | | |
|--|----------|----------|--------|
| Part | Assembly | Status | Others |
| 1 | PL | PL-10.10 | 24.14% |
| 2 | PL | PL-10.10 | 24.14% |
| 3 | PL | PL-10.10 | 24.14% |
| 4 | PL | PL-10.10 | 0.00% |
| 5 | PL | PL-10.10 | 0.00% |
| 6 | PL | PL-10.10 | 42.14% |
| 7 | PL | PL-10.10 | 0.00% |
| 8 | PL | PL-10.10 | 4.00% |
| 9 | PL | PL-10.10 | 28.14% |
| 10 | PL | PL-10.10 | 24.14% |
| 11 | PL | PL-10.10 | 69.14% |
| 12 | PL | PL-10.10 | 11.14% |
| 13 | PL | PL-10.10 | 11.14% |
| 14 | PL | PL-10.10 | 11.14% |
| 15 | PL | PL-10.10 | 4.00% |
| 16 | PL | PL-10.10 | 0.00% |
| 17 | PL | PL-10.10 | 6.00% |
| 18 | PL | PL-10.10 | 11.14% |
| 19 | PL | PL-10.10 | 11.14% |
| 20 | PL | PL-10.10 | 4.00% |

| TAXPAYER ACTION 2: MATCHING CONTRIBUTIONS | | | |
|---|------------|----------|-------|
| Plan | Investment | Stimulus | Other |
| 21 | F | 179.2 | 42.96 |
| 22 | F | 179.2 | 42.96 |
| 23 | F | 179.2 | 42.96 |
| 24 | F | 179.2 | 42.96 |
| 25 | F | 179.2 | 42.96 |
| 26 | F | 179.2 | 42.96 |
| 27 | F | 179.2 | 42.96 |
| 28 | F | 179.2 | 42.96 |
| 29 | F | 179.2 | 42.96 |
| 30 | F | 179.2 | 42.96 |
| 31 | F | 179.2 | 42.96 |
| 32 | F | 179.2 | 42.96 |
| 33 | F | 179.2 | 42.96 |
| 34 | F | 179.2 | 42.96 |
| 35 | F | 179.2 | 42.96 |
| 36 | F | 179.2 | 42.96 |
| 37 | F | 179.2 | 42.96 |
| 38 | F | 179.2 | 42.96 |
| 39 | F | 179.2 | 42.96 |
| 40 | F | 179.2 | 42.96 |

| NATIONAL FUND 1 LEARNING COORDINATOR | | | |
|--------------------------------------|-------------|---------|---------|
| Page | Score/total | 3 stars | Other |
| 201 | 10 | 41.5/50 | 18.6/45 |
| 202 | 10 | 41.5/50 | 18.6/45 |
| 203 | 10 | 41.5/50 | 18.6/45 |
| 204 | 10 | 41.5/50 | 17.5/45 |
| 205 | 10 | 38.0/50 | 12.8/45 |
| 206 | 10 | 37.5/50 | 79.1/15 |
| 207 | 10 | 37.5/50 | 18.4/45 |
| 208 | 10 | 41.5/50 | 0.0/45 |
| 209 | 10 | 41.7/50 | 0.0/45 |
| 210 | 10 | 41.5/50 | 0.0/45 |
| 211 | 10 | 41.5/50 | 0.0/45 |
| 212 | 10 | 41.5/50 | 0.0/45 |
| 213 | 10 | 41.5/50 | 1.0/45 |
| 214 | 10 | 41.5/50 | 10.0/45 |
| 215 | 10 | 39.9/45 | 10.0/45 |
| 216 | 10 | 37.5/50 | 28.4/45 |
| 217 | 10 | 37.5/50 | 29.5/45 |
| 218 | 10 | 38.0/50 | 28.8/45 |
| 219 | 10 | 41.5/50 | 32.5/45 |
| 220 | 10 | 41.4/50 | 28.9/45 |
| 221 | 10 | 41.5/50 | 38.0/45 |
| 222 | 10 | 41.7/50 | 38.0/45 |

| TAYLOR RISK MANAGEMENT COMPANIES | | |
|----------------------------------|---------|--------|
| Name | Country | Assets |
| 1 | U.S. | \$1.4 |
| 2 | U.S. | \$1.4 |
| 3 | U.S. | \$1.4 |
| 4 | U.S. | \$1.4 |
| 5 | U.S. | \$1.4 |
| 6 | U.S. | \$1.4 |
| 7 | U.S. | \$1.4 |
| 8 | U.S. | \$1.4 |
| 9 | U.S. | \$1.4 |
| 10 | U.S. | \$1.4 |
| 11 | U.S. | \$1.4 |
| 12 | U.S. | \$1.4 |
| 13 | U.S. | \$1.4 |
| 14 | U.S. | \$1.4 |
| 15 | U.S. | \$1.4 |
| 16 | U.S. | \$1.4 |
| 17 | U.S. | \$1.4 |
| 18 | U.S. | \$1.4 |
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| 80 | U.S. | \$1.4 |
| 81 | U.S. | \$1.4 |
| 82 | U.S. | \$1.4 |
| 83 | U.S. | \$1.4 |
| 84 | U.S. | \$1.4 |
| 85 | U.S. | \$1.4 |
| 86 | U.S. | \$1.4 |
| 87 | U.S. | \$1.4 |
| 88 | U.S. | \$1.4 |
| 89 | U.S. | \$1.4 |
| 90 | U.S. | \$1.4 |
| 91 | U.S. | \$1.4 |
| 92 | U.S. | \$1.4 |
| 93 | U.S. | \$1.4 |
| 94 | U.S. | \$1.4 |
| 95 | U.S. | \$1.4 |
| 96 | U.S. | \$1.4 |
| 97 | U.S. | \$1.4 |
| 98 | U.S. | \$1.4 |
| 99 | U.S. | \$1.4 |
| 100 | U.S. | \$1.4 |

NOTE:
DATUM NAAD63 WAS UTILIZED TO DETERMINE COORDINATE LOC

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| PROJECT # 12708 | DATE NO. 17 |
| RUNWAY 9 RUN-UP AREA AND | |
| TW INTERSECTION IMPROVEMENTS | |
| PAVEMENT MARKING COORDINATES - ALT 1 | |
| C41A | |
| TOTAL 38 | |
| OLD FILE | |
| 709-441-11-1000 - A | |
| ISSUING FILE NO. | |

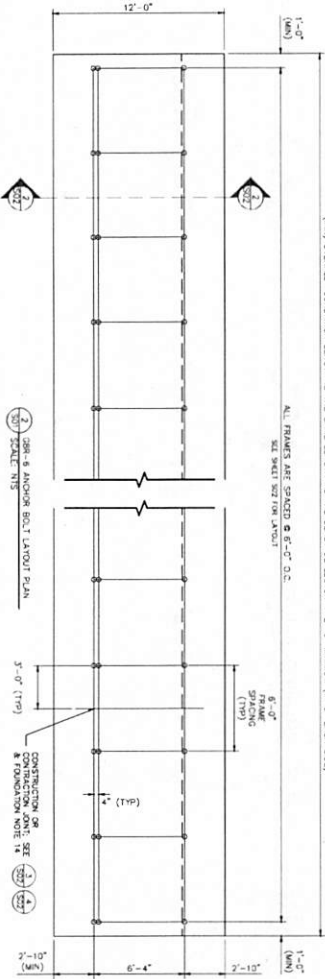
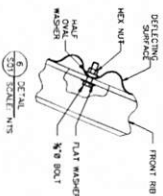
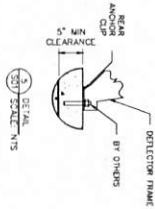
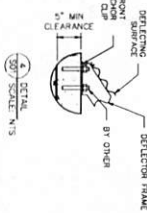
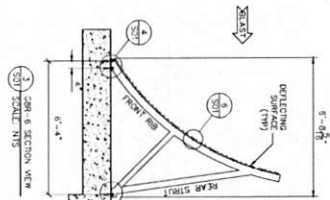
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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33300

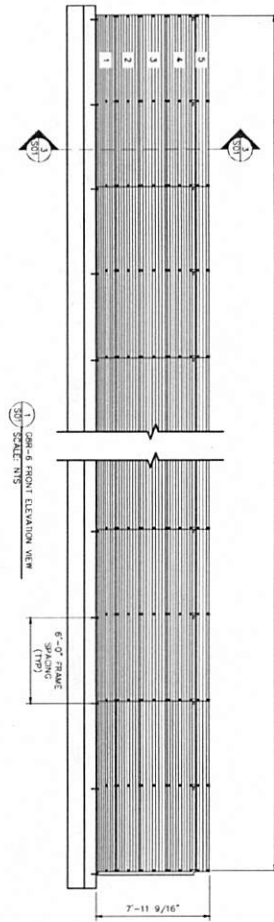
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| DRAWN BY: ALB | DATE: 03/04/2007 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFC | |
| FIELD BOOK | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
O'DONNELL



NOTE: DRAWING IS SQUARE SEE SHEET 502 FOR SHAPE OF DEFLECTION AND FOUNDATION



SEE SHEET 502 FOR LAYOUT

- BLAST DEFLECTOR NOTES:**
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE AISC, AIA, AND AIAA SPECIFICATIONS.
 2. NO FABRICATOR SHALL BE OPERATED WITH THE CLOSER THAN 50' TO THE LEADING EDGE OF THE DEFLECTOR.
 3. THE DEFLECTOR SHALL BE A MINIMUM OF 6' WITH A GREATER EFFECTIVE HEIGHT.
 4. HEIGHT MEASUREMENT SHALL BE ASY A/S STEEL AND NOT-OP CALIBRATED TO 2 OZ/FT² FOR ASY A/S.
 5. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 6. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 7. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 8. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 9. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 10. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 11. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 12. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
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 14. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 15. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 16. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 17. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.
 18. DEFLECTOR SHALL BE CONSTRUCTED WITH STEEL SHAPES TO 16 GA MINIMUM 210 OZ/FT² (210) NOT-OP CALIBRATED FRESH ASY A/S.

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PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
BLAST FENCE

| NO | DATE | BY | CHKD | DESCRIPTION |
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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| DATE | BY | CHKD | DESCRIPTION |
|------|----|------|-------------|
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State of Florida
Professional Engineer
License No. 62478
THOMAS F. O'DONNELL

ELECTRICAL LEGEND

| SYMBOL | DESCRIPTION |
|--------|--|
| | RELOCATED L-861(L), LED, WTL, ELEVATED 1/4 W EDGE LIGHT MOUNTED ON A NEW L-867 BASE CAN INSTALLED IN EARTH/ROCK WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS. |
| | NEW L-861(L), LED, WTL, ELEVATED 1/4 W EDGE LIGHT MOUNTED ON A NEW L-867 BASE CAN INSTALLED IN EARTH/ROCK WITH A "CORTEN" OR APPROVED EQUAL BASE PLATE WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS. |
| | RELOCATED L-861(L), LED, WTL, ELEVATED 1/4 W EDGE LIGHT MOUNTED ON A NEW TELESCOPIC L-867 BASE CAN INSTALLED IN EXISTING PAVEMENT WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS. |
| | RELOCATED L-861(L), LED, WTL, ELEVATED 1/4 W EDGE LIGHT MOUNTED ON A NEW TELESCOPIC L-867 BASE CAN INSTALLED IN EXISTING PAVEMENT WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS. |
| | RELOCATED L-852(L), LED, STYLE 3, UNI-DIRECTIONAL, FLUSH MOUNT R/W GUARD LIGHT AND NEW 12" DIA L-868 2-PIECE BASE CAN INSTALLED IN NEW FULL STRENGTH PAVEMENT. CONTRACTOR SHALL PROVIDE AND INSTALL SPACERS (W/DAM RING) WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS. |
| | CONTROL MODULE PRESET FOR ON 1 = CONTROL MODULE PRESET FOR OFF |
| | RELOCATED L-804(L), MODE 1, LED, ELEVATED RUNWAY GUARD LIGHT MOUNTED ON A NEW L-867 BASE CAN INSTALLED IN EARTH WITH A "CORTEN" OR APPROVED EQUAL BASE PLATE AND PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS. |
| | NEW DIRECT BURIED SCHEDULE 40 PVC CONDUIT INSTALLED IN EARTH. COUNTERPOISE SHALL BE INSTALLED ABOVE CONDUIT PER DETAIL. SEE PLANS FOR AMOUNT/SIZE AND LOCATION OF CONDUITS. |
| | NEW CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT INSTALLED IN NEW FULL STRENGTH PAVEMENT. COUNTERPOISE SHALL BE INSTALLED ABOVE CONDUIT PER DETAIL. SEE PLANS FOR AMOUNT/SIZE AND LOCATION OF CONDUITS. |
| | NEW CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT INSTALLED IN EXISTING FULL STRENGTH PAVEMENT. COUNTERPOISE SHALL BE INSTALLED ABOVE CONDUIT PER DETAIL. SEE PLANS FOR AMOUNT/SIZE AND LOCATION OF CONDUITS. CONTRACTOR SHALL REPAIR PAVEMENT ACCORDINGLY. |
| | NEW L-858(L), LED, SIZE 1 AIRFIELD GUIDANCE SIGN ON NEW CONCRETE BASE INSTALLED IN PAVEMENT. REFER TO LIGHTED SIGN SCHEDULES FOR ADDITIONAL INFORMATION. # = SIGN NUMBER |
| | NEW L-858(L), LED, SIZE 1 AIRFIELD GUIDANCE SIGN ON NEW CONCRETE BASE INSTALLED IN NEW PAVEMENT. REFER TO LIGHTED SIGN SCHEDULES FOR ADDITIONAL INFORMATION. # = SIGN NUMBER |
| | RELOCATED L-858(L), LED, SIZE 1 AIRFIELD GUIDANCE SIGN ON NEW CONCRETE BASE INSTALLED IN EARTH. REFER TO LIGHTED SIGN SCHEDULES FOR ADDITIONAL INFORMATION. # = SIGN NUMBER |
| | NEW L-867 16" DIA X 24" DEEP BOTTOMLESS 2 CAN JUNCTION CAN PLAZA INSTALLED IN EARTH. # = JUNCTION CAN PLAZA NUMBER |
| | NEW 3/4" X 20" MIN. GROUND ROD, EXOTHERMICALLY WELDED AND CONNECTED TO COUNTERPOISE SYSTEM AT A MAX OF 500' SPACING |
| | 2-X - 2 INDICATES NUMBER OF CONDUCTORS, X INDICATES CIRCUIT ID 1C - 1 INDICATES NUMBER OF #6 SOLID COUNTERPOISE 1W2 - 1 INDICATES NUMBER OF CONDUITS, 2 INDICATES CONDUIT SIZE # = QUANTITY OF CONDUITS |
| | 2-X - 2 INDICATES NUMBER OF CONDUCTORS, X INDICATES CIRCUIT ID - 1 INDICATES NUMBER OF EXISTING CONDUITS, 2 INDICATES EXISTING CONDUIT SIZE |
| | DEMOLISH OR MODIFY ITEM. SEE NOTES FOR INFORMATION |
| | SEE DEMOLITION AND INSTALLATION NOTES # INDICATES THE NOTE NUMBER Yx INDICATES THE QUANTITY OF NOTES PER LOCATION |
| | EXISTING ELEVATED TAXIWAY EDGE LIGHT |
| | EXISTING RUNWAY EDGE LIGHT |
| | EXISTING IN-PAVEMENT FLUSH MOUNTED RUNWAY GUARD LIGHT |
| | EXISTING ELEVATED RUNWAY GUARD LIGHT |
| | EXISTING AIRFIELD GUIDANCE SIGN # = SIGN NUMBER |
| | EXISTING JUNCTION CAN |
| | EXISTING WINDCONE |
| | EXISTING L-867 JUNCTION CAN PLAZA |
| | EXISTING CONDUIT SYSTEM |
| | EXISTING AIRFIELD LIGHTING DUCTBANK |
| | EXISTING FAA CABLE/CONDUIT |
| | EXISTING FPL CABLE/CONDUIT |
| | EXISTING COMMUNICATIONS CONDUIT/DUCTBANK |
| | TAXIWAY SAFETY AREA |
| | RUNWAY SAFETY AREA |
| | TAXIWAY OBJECT FREE AREA |

NOTE: SYMBOL SIZES ARE NOT SHOWN TO SCALE FOR CLARITY ON THE PLAN SHEETS.

DEMOLITION NOTES

- CONTRACTOR SHALL DISCONNECT THE EXISTING CIRCUITS AND REMOVE CONDUCTORS BACK TO THE LAST UNAFFECTED LOCATION. REMOVE AND DISPOSE OF THE EXISTING CONDUCTORS, TRANSFORMER AND BASE CAN AND RELOCATE THE EXISTING EDGE LIGHT TO THE NEW LOCATION AS SHOWN ON PLANS. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE DEWATERING OF THE EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES SHALL BE INCLUDED IN THE LINE ITEM COST FOR REMOVAL OF A BASE CAN.
- CONTRACTOR SHALL DISCONNECT THE EXISTING AIRFIELD GUIDANCE SIGN FROM THE LIGHTING CIRCUIT, AND PULL BACK THE EXISTING CONDUCTORS TO THE EXISTING LIGHT FIXTURE/JUNCTION CAN/MANHOLE AND RECONNECT THE EXISTING CONDUCTORS TO REMOVE THE SIGN FROM THE CIRCUIT. REMOVE AND DISPOSE OF THE EXISTING CONCRETE BASE, TRANSFORMER, CONDUITS AND CABLES AND RELOCATE SIGN TO THE NEW LOCATION AS SHOWN ON PLANS. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE LINE ITEM COST SHALL INCLUDE DEWATERING OF EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES.
- CONTRACTOR SHALL DISCONNECT THE EXISTING CIRCUITS AND REMOVE CONDUCTORS BACK TO THE LAST UNAFFECTED LOCATION. REMOVE AND DISPOSE OF THE EXISTING CONDUCTORS, TRANSFORMER AND BASE CAN AND RELOCATE THE EXISTING ELEVATED RUNWAY GUARD LIGHT TO THE NEW LOCATION AS SHOWN ON PLANS. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE DEWATERING OF THE EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES SHALL BE INCLUDED IN THE LINE ITEM COST FOR REMOVAL OF A BASE CAN.
- CONTRACTOR SHALL DISCONNECT THE EXISTING CIRCUITS AND REMOVE CONDUCTORS BACK TO THE LAST UNAFFECTED LOCATION. CORE DRILL EXISTING PAVEMENT, REMOVE AND DISPOSE OF THE EXISTING CONDUCTORS, TRANSFORMER AND BASE CAN AND RELOCATE THE EXISTING IN-PAVEMENT FLUSH MOUNTED RUNWAY GUARD LIGHT AND CONTROL MODULE TO THE NEW LOCATION AS SHOWN ON PLANS. BACKFILL WITH CONCRETE FLUSH WITH PAVEMENT ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE DEWATERING OF THE EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES SHALL BE INCLUDED IN THE LINE ITEM COST FOR REMOVAL OF A BASE CAN.
- CONTRACTOR SHALL DISCONNECT THE EXISTING CIRCUITS AND REMOVE CONDUCTORS BACK TO THE LAST UNAFFECTED LOCATION. CORE DRILL EXISTING PAVEMENT, REMOVE AND DISPOSE OF THE EXISTING CONDUCTORS, TRANSFORMER AND BASE CAN AND RELOCATE THE EXISTING ELEVATED RUNWAY GUARD LIGHT TO THE NEW LOCATION AS SHOWN ON PLANS. BACKFILL WITH CONCRETE FLUSH WITH PAVEMENT ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE DEWATERING OF THE EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES SHALL BE INCLUDED IN THE LINE ITEM COST FOR REMOVAL OF A BASE CAN.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING SIGN LEGEND AND PROVIDE AND INSTALL NEW SIGN LEGEND PANELS ON THE EXISTING GUIDANCE SIGN. REFER TO SIGN SCHEDULE FOR ADDITIONAL INFORMATION.
- CONTRACTOR SHALL DISCONNECT, REMOVE AND DISPOSE OF THE EXISTING OBSTRUCTION LIGHTING SYSTEM TO INCLUDE OBSTRUCTION LIGHTS, POWER SUPPLY, CONDUCTORS, CONDUITS, BASE CAN AND PEDESTAL. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE DEWATERING OF THE EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES SHALL BE INCLUDED IN THE LINE ITEM COST FOR REMOVAL OF A BASE CAN.
- CONTRACTOR SHALL DISCONNECT THE EXISTING AIRFIELD GUIDANCE SIGN FROM THE LIGHTING CIRCUIT, AND PULL BACK THE EXISTING CONDUCTORS TO THE EXISTING LIGHT FIXTURE/JUNCTION CAN/MANHOLE AND RECONNECT THE EXISTING CONDUCTORS TO REMOVE THE SIGN FROM THE CIRCUIT. REMOVE AND DISPOSE OF THE EXISTING CONCRETE BASE, TRANSFORMER, CONDUITS AND CABLES AND DELIVER SIGN TO OWNER. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE LINE ITEM COST SHALL INCLUDE DEWATERING OF EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES.
- CONTRACTOR SHALL HAND EXCAVATE, LOCATE AND EXPOSE THE EXISTING 1W2 DUCTBANK. PROTECT THE EXISTING CONDUIT DURING CONSTRUCTION AND ENCASE THE EXISTING CONDUIT IN CONCRETE IN LOCATION SHOWN AND BACKFILL ACCORDINGLY. PROVIDE A MINIMUM OF 3" CONCRETE ENCASEMENT AROUND EXISTING CONDUITS IN A WORKMANSHIP MANNER. SEE PHASING PLANS FOR SEQUENCING OF WORK.
- CONTRACTOR SHALL HAND EXCAVATE, LOCATE AND EXPOSE THE EXISTING 2W4 DUCTBANK. PROTECT THE EXISTING CONDUIT DURING CONSTRUCTION AND ENCASE THE EXISTING CONDUIT IN CONCRETE IN LOCATION SHOWN AND BACKFILL ACCORDINGLY. PROVIDE A MINIMUM OF 3" CONCRETE ENCASEMENT AROUND EXISTING CONDUITS IN A WORKMANSHIP MANNER. SEE PHASING PLANS FOR SEQUENCING OF WORK.
- CONTRACTOR SHALL DISCONNECT THE EXISTING CIRCUITS AND REMOVE CONDUCTORS BACK TO THE LAST UNAFFECTED LOCATION. REMOVE AND DISPOSE OF THE EXISTING 2 CAN JUNCTION CAN PLAZA AND CONDUCTORS. EXTEND CONDUITS TO NEW PLAZA AS SHOWN ON CIRCUITRY PLANS. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE DEWATERING OF THE EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES SHALL BE INCLUDED IN THE LINE ITEM COST FOR REMOVAL OF A 2 CAN JUNCTION CAN PLAZA.

INSTALLATION NOTES:

- CONTRACTOR SHALL HAND EXCAVATE, LOCATE AND INTERCEPT EXISTING CONDUIT SYSTEM AND EXTEND TO NEW LIGHT BASE/JUNCTION CAN/SIGN. CLEAN OUT AND DEWATER THE EXISTING CONDUIT SYSTEM. CONTRACTOR SHALL INCLUDE DEWATERING IN THE LINE ITEM COST FOR THE INTERCEPTION OF THE CONDUIT SYSTEM.
- CONTRACTOR SHALL HAND EXCAVATE, CORE DRILL THE EXISTING JUNCTION CAN/BASE CAN AND PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTOR SYSTEM. COMPLETE, SEAL, PATCH AND REPAIR JUNCTION CAN/BASE CAN, BACKFILL AND SOD ACCORDINGLY AND MAKE ALL NECESSARY CONNECTIONS FOR A COMPLETE WORKING SYSTEM IN PLACE.
- CONTRACTOR SHALL IDENTIFY AND INTERCEPT THE EXISTING CIRCUIT CONDUCTORS IN THE EXISTING BASE CAN/MANHOLE/JUNCTION CAN AND PROVIDE AND INSTALL NEW SPLICE KITS AND EXTEND THE NEW CIRCUIT CONDUCTORS ACCORDINGLY. MAKE ALL NECESSARY CONNECTIONS FOR A COMPLETE WORKING SYSTEM IN PLACE.

| CIRCUIT ID: | TYPE OF CABLE | CABLE JACKET COLOR | CABLE TAPE COLOR |
|--|----------------------|--------------------|------------------|
| BW = RUNWAY 9-27 WEST CIRCUIT | #8, L-B24, SKY CABLE | BLACK | BLUE |
| A = TAXIWAY ALPHA CIRCUIT | #8, L-B24, SKY CABLE | BLACK | RED |
| EW = TAXIWAY ECHO WEST CIRCUIT | #8, L-B24, SKY CABLE | BLACK | PINK |
| ERGL = ELEVATED RUNWAY GUARD LIGHT CIRCUIT | #8, L-B24, SKY CABLE | BLACK & RED | * |
| FRGL = FLUSH RUNWAY GUARD LIGHT CIRCUIT | #8, L-B24, SKY CABLE | BLACK & RED | * |

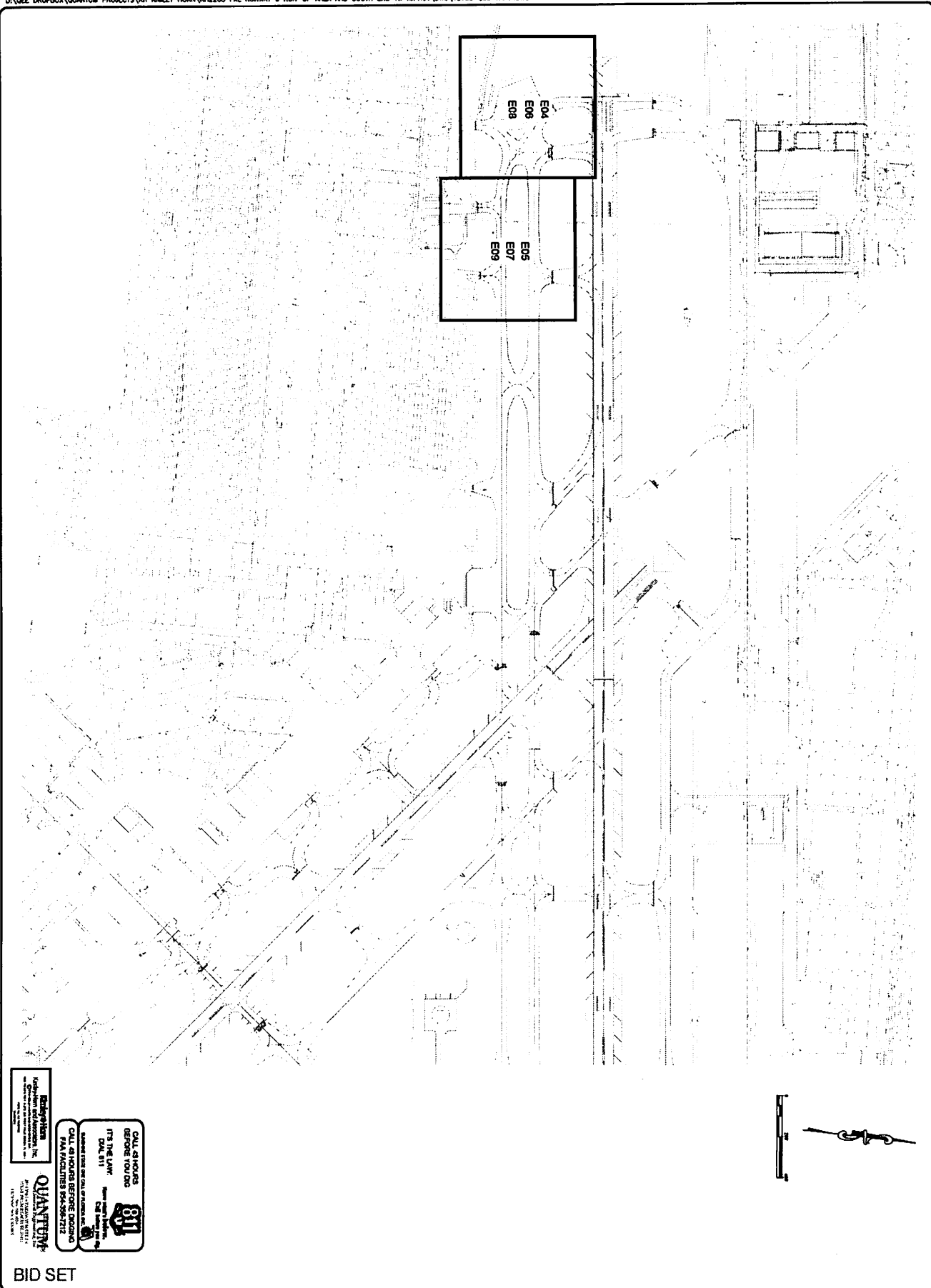
* = CONTRACTOR SHALL USE 8" RED HEAT SHRINK ON EITHER SIDE OF THE CONNECTOR KITS IN LIEU OF RED L-B24 CABLE NOTE: PROVIDE AND INSTALL COLORED PHASE TAPE (3M ELECTRICAL WHYL) ON CABLES LOCATED IN EACH BASE CAN/ JUNCTION CAN/ MANHOLE. COLOR SHALL BE AS NOTED IN THE SCHEDULE ABOVE (CABLE ID COLOR). PROVIDE 1/2" WIDE TAPE WITH A MINIMUM OF 4 LAPS. THERE SHALL BE A MINIMUM OF ONE COLORED ID TAPE PER CABLE WHEN NO CONNECTOR KITS ARE PRESENT. WHEN CONNECTOR KITS ARE PRESENT, THERE SHALL BE ONE COLORED ID TAPE ON EACH CABLE END.

| JUNCTION CAN IDENTIFICATION WITH CIRCUIT ID | |
|---|-------|
| JCP ID | 1 2 3 |
| JCP-01 | A B C |
| JCP-02 | D E F |
| JCP-03 | G H I |

SP = SPARE CONDUIT



| | | | |
|--|------------------|-------------------|------------------|
| State of Florida Professional Engineer License No. 71489 | | JAMES W. KAPPEL | |
| DATE 5/1/2022 | BY JWK | DATE 5/1/2022 | BY JWK |
| REVISION 1 | DATE 5/1/2022 | REVISION 1 | DATE 5/1/2022 |
| CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING & ARCHITECTURE 100 North Andrews Avenue, Fort Lauderdale, Florida 33304 | | | |
| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS ELECTRICAL LEGEND AND NOTES | | | |
| E02 | | 74 | |
| DRAFTING FILE NO. 12708-003-LEG-003 | | 12708-003-LEG-003 | |



14-00000-000

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BID SET

PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL KEY MAP

NO. **DATE** **BY** **CHKD** **DESCRIPTION**

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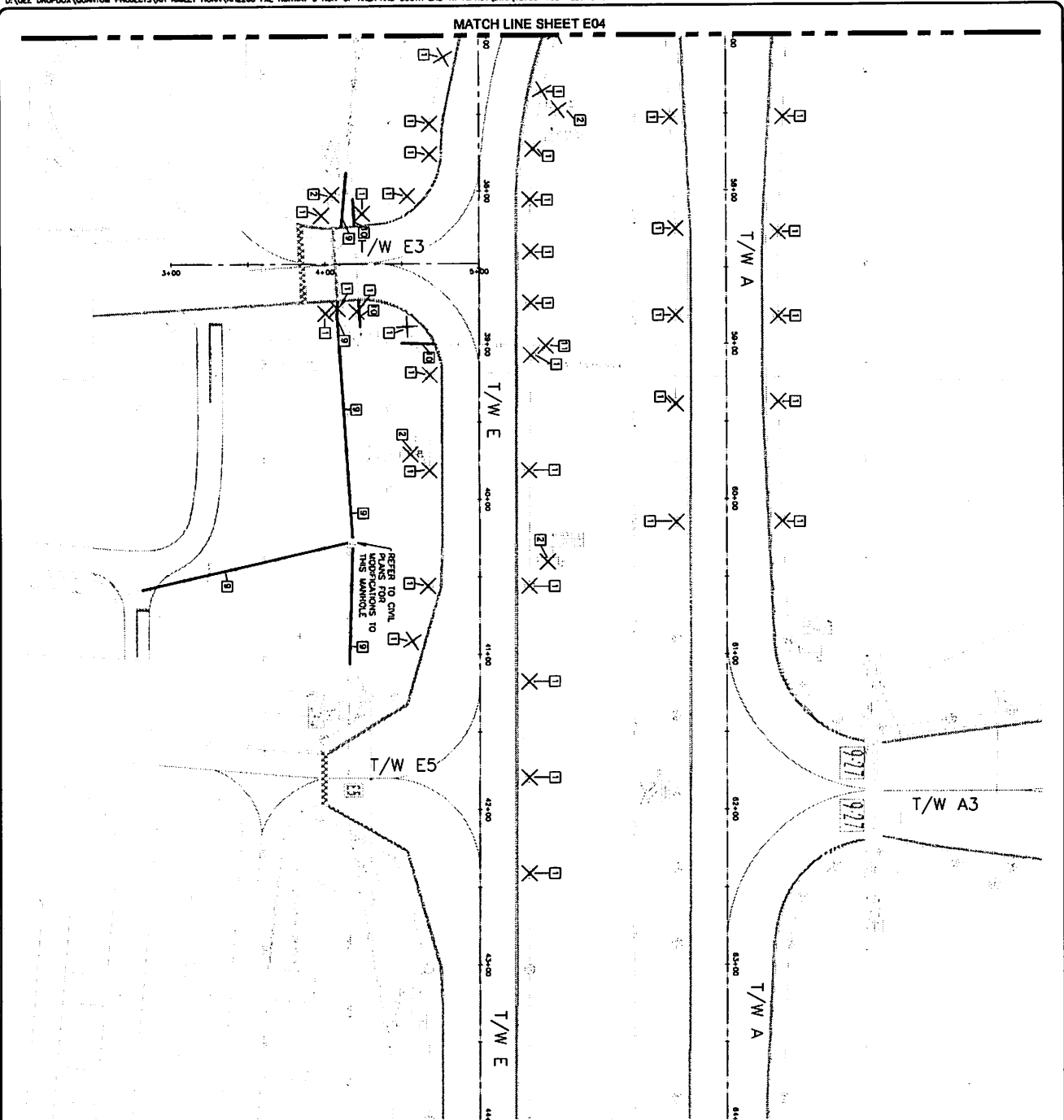
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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|------------------|-----------------|
| DESIGNED BY: JWK | DATE: 5/4/2022 |
| DRAWN BY: JWK | SCALE: AS NOTED |
| CHECKED BY: ALC | FIELD BOOK: |

State of Florida
Professional Engineer
License No. 71499

JAMES W. KAPPEL

14-00000-000



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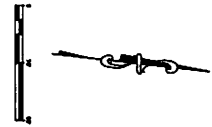
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NOTES:
1. SEE SHEET FOR THE ELECTRICAL DEMOLITION NOTES DESCRIPTIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXISTING ELECTRICAL UTILITIES AND EQUIPMENT IN THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND EQUIPMENT NOT TO BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND EQUIPMENT NOT TO BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND EQUIPMENT NOT TO BE REMOVED.

NOTES:
1. SEE SHEET FOR THE ELECTRICAL DEMOLITION NOTES DESCRIPTIONS.

LEGEND:
[Symbol] EXISTING ELECTRICAL UTILITIES
[Symbol] EXISTING ELECTRICAL EQUIPMENT
[Symbol] EXISTING ELECTRICAL STRUCTURES
[Symbol] EXISTING ELECTRICAL CONDUITS
[Symbol] EXISTING ELECTRICAL CABLES
[Symbol] EXISTING ELECTRICAL PIPING
[Symbol] EXISTING ELECTRICAL DUCTS
[Symbol] EXISTING ELECTRICAL MANHOLES
[Symbol] EXISTING ELECTRICAL VALVES
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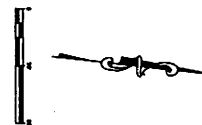
PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL DEMOLITION PLAN

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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGNER: JMK
DATE: 5/4/2023
REVISIONS: AS NOTED
CHECKED BY: JMK
FIELD BOOK: ALC

State of Florida
Professional Engineer
License No. 71459
JAMES W. KAPPEL

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**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL LAYOUT PLAN**

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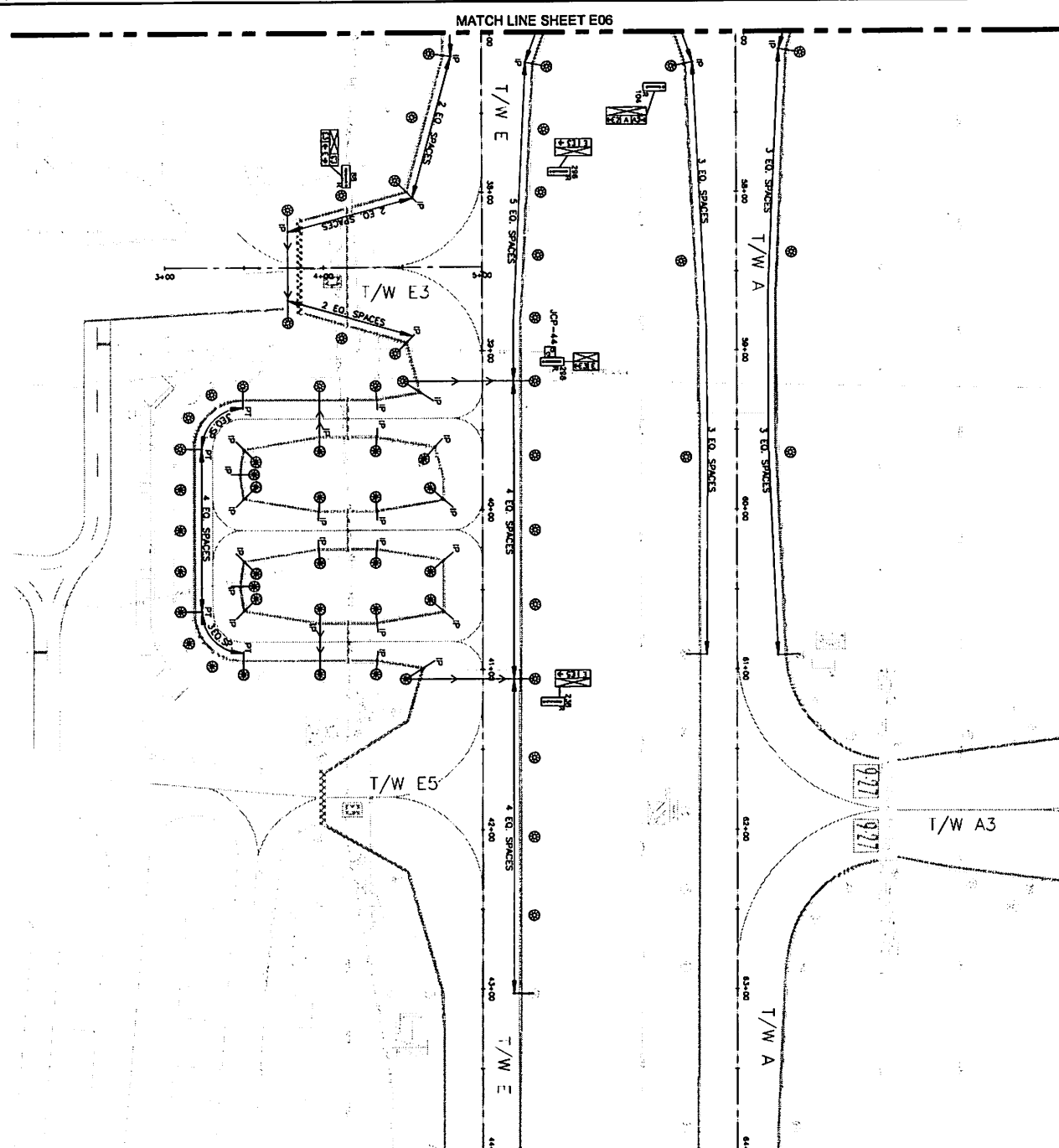
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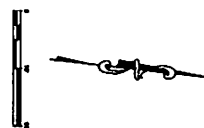
State of Florida
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License No. 71499

JAMES W. KAPPE



NOTES

1. REFER TO TYPICAL TAXIWAY EDGE LIGHT COORDINATION SETS FOR LAYOUT AND INSTALLATION INFORMATION OF NEW EDGE LIGHTS AND DATE CODE.
2. CONSTRUCTION SHALL UTILIZE EXISTING, SPACING, (P) AND (P) FOR EXISTING PAVEMENT. (P) AND (P) LOCATIONS SHALL BE FOR EXISTING PAVEMENT.
3. TYPICAL NEW SIGN OBJECTS TO BE INSTALLED AT 15' FROM EDGE OF PAVEMENT. (P) AND (P) LOCATIONS SHALL BE FOR EXISTING PAVEMENT. (P) AND (P) LOCATIONS SHALL BE FOR EXISTING PAVEMENT.
4. THE LAST TAXIWAY EDGE LIGHT AT THIS LOCATION SHALL BE INSTALLED 3' FROM THE TAXIWAY EDGE LIGHT OBJECT LOC.
5. THE LAST TAXIWAY EDGE LIGHT AT THIS LOCATION SHALL BE INSTALLED 3' FROM THE TAXIWAY EDGE LIGHT OBJECT LOC.
6. REFER TO TYPICAL TAXIWAY EDGE LIGHT COORDINATION SETS FOR LAYOUT AND INSTALLATION INFORMATION.



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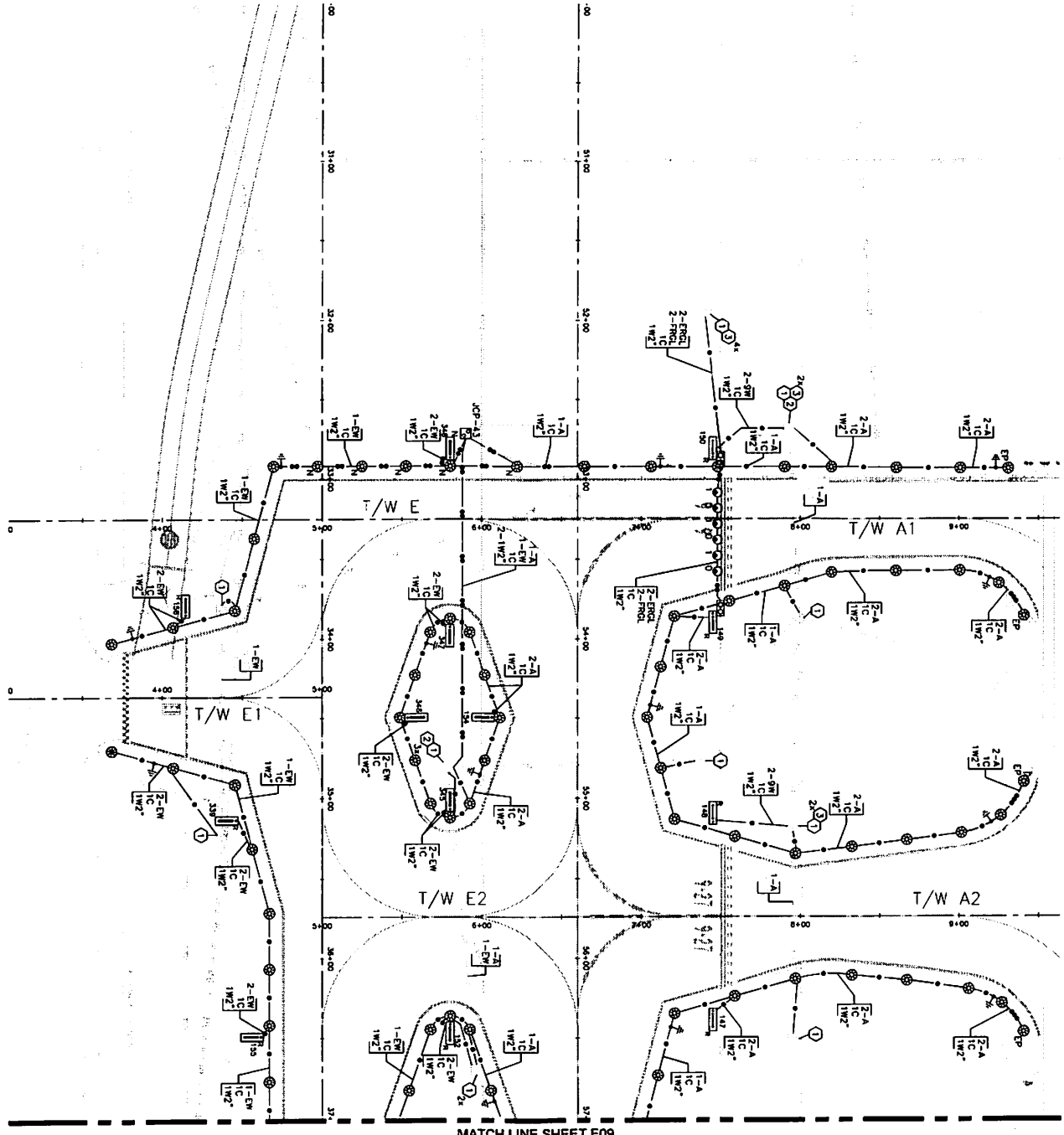
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MATCH LINE SHEET E09

NOTES:
1. SEE SHEET FOR THE ELECTRICAL INSTALLATION NOTES DESCRIPTIONS.



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RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL CIRCUITRY PLAN

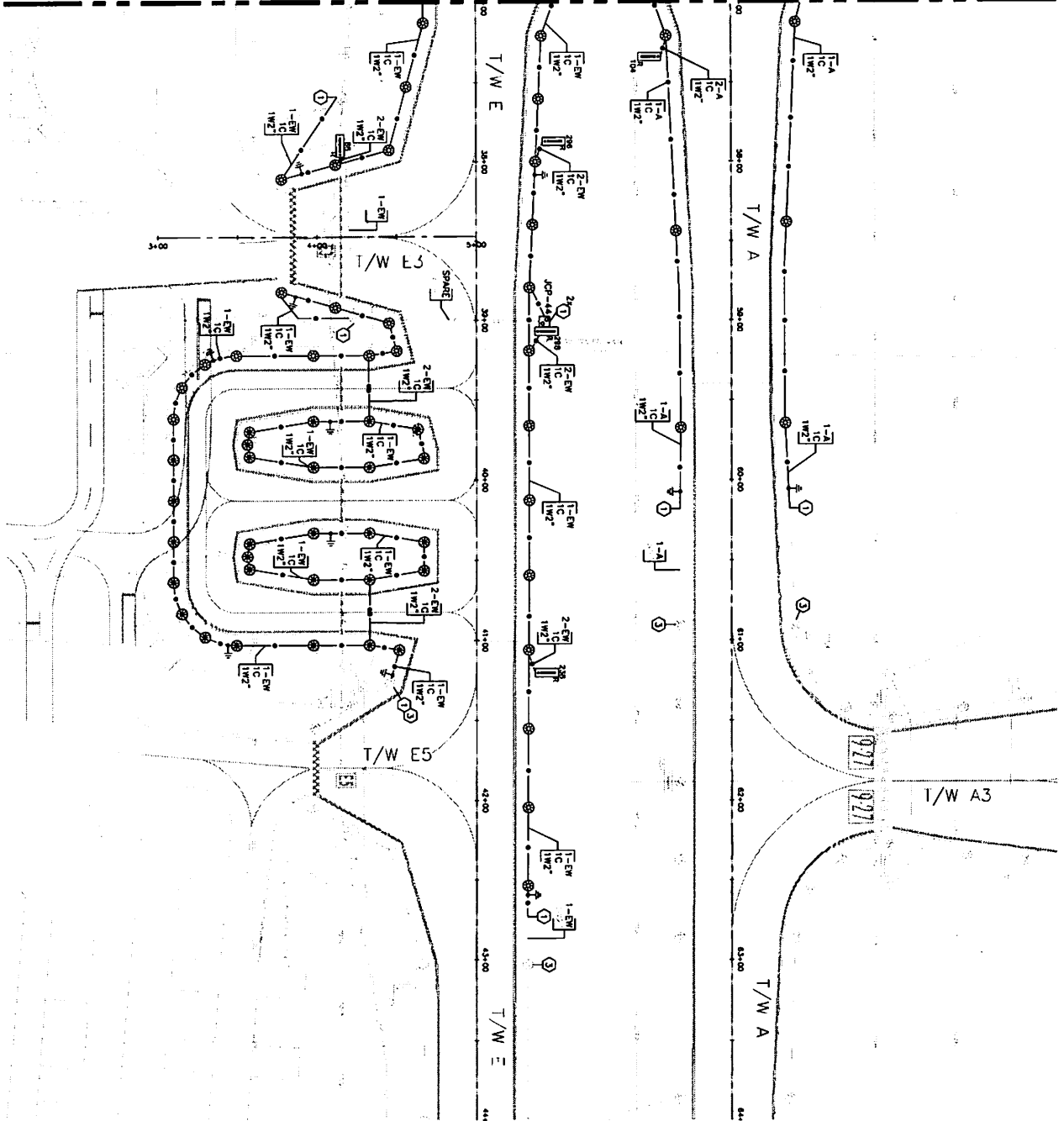
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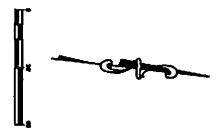
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MATCH LINE SHEET E08



NOTES:
1. SEE SHEET E02 FOR ELECTRICAL INSTALLATION NOTES DESCRIPTIONS.



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12708-MULTI-ELC3
DATE: 7/20/2022

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TW INTERSECTION IMPROVEMENTS
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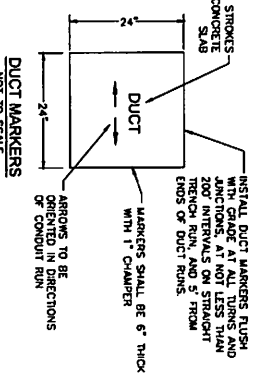
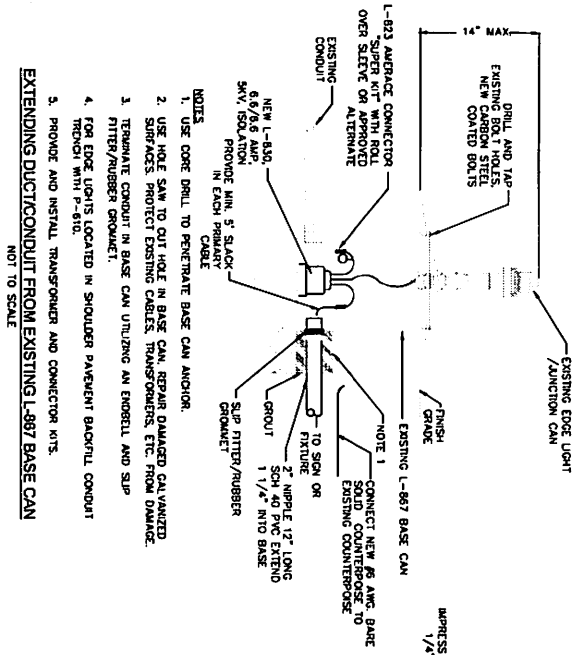
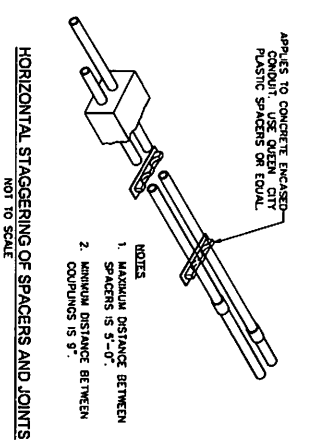
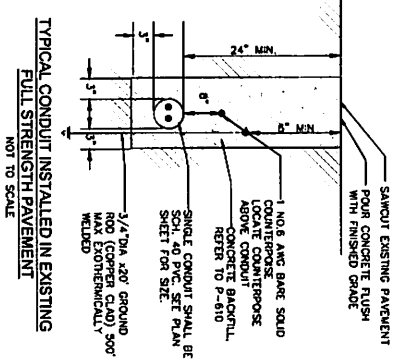
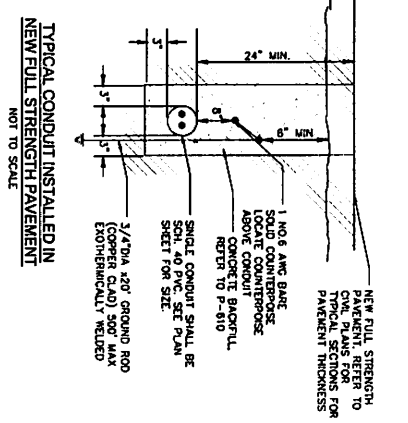
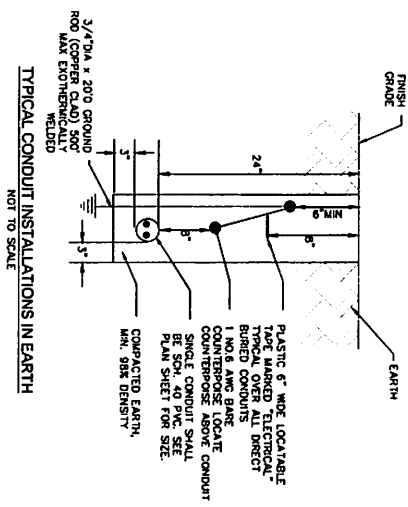
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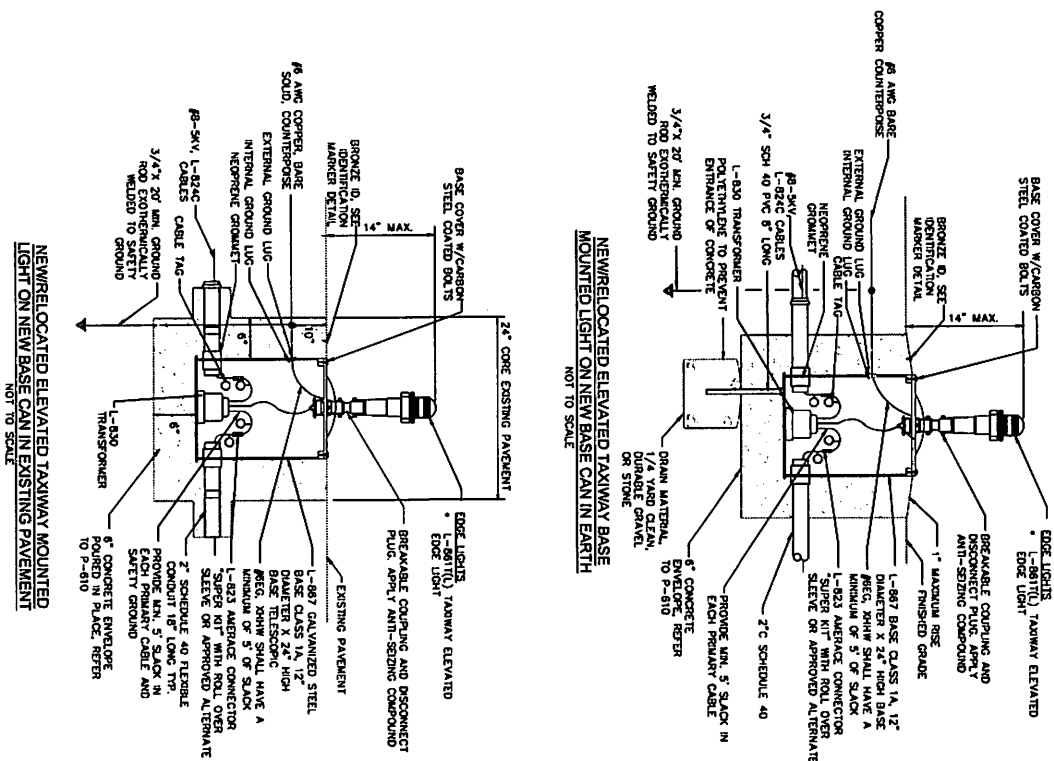
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RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL DETAILS

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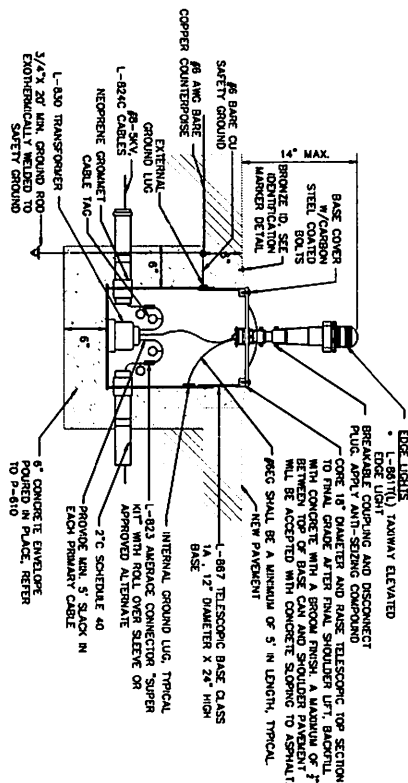
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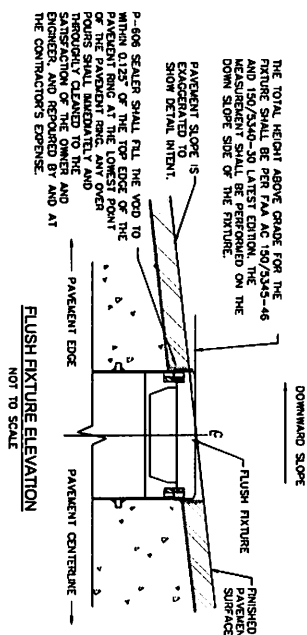
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**NEW/RELOCATED ELEVATED TAXIWAY BASE
MOUNTED LIGHT ON NEW BASE CAN IN EARTH**
NOT TO SCALE



NEW/RELOCATED ELEVATED TAXIWAY MOUNTED
LIGHT ON NEW BASE CAN IN NEW PAVEMENT
NOT TO SCALE



FLUSH FIXTURE ELEVATION
NOT TO SCALE

THE TOTAL HEIGHT ABOVE GRADE FOR THE FIXTURE SHALL BE PER F.A.C. 150.3345-46 AND 150.3340-30 LATEST EDITION. THE MEASUREMENT SHALL BE PREPARED ON THE DOWN SLOPE SIDE OF THE FIXTURE.

P-608 SEALER SHALL FILL THE VOID TO WITHIN 0.125" OF THE TOP EDGE OF THE PAVEMENT RING AT THE LOWEST POINT OF THE PAVEMENT RING, ANY OVER FLOWS SHALL IMMEDIATELY AND THOROUGHLY CLEANED TO THE SATISFACTION OF THE OWNER AND ENGINEER, AND REPAIRED BY AND AT THE CONTRACTOR'S EXPENSE.

**NEW/RELOCATED ELEVATED TAXIWAY MOUNTED
LIGHT ON NEW BASE CAN IN EXISTING PAVEMENT**
NOT TO SCALE

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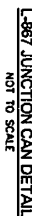
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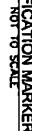
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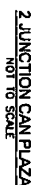
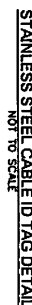
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1. NUMBER AND ORIENTATION OF CONDENTS VARY. SEE PLAIN SHEET FOR DETAILS.
 2. INSTAL TWO GROUND ROOS AT ALL JUNCTION CAN PLAZAS AS SHOWN. TWO GROUND ROOS PER PLAZA LOCATED AT OPPOSITE CORNERS SHALL BE PROVIDED.
 3. CONTRACTOR SHALL PROVIDE A 7' DIA DOME BRONZE MARKER AT EACH JUNCTION CAN AS SHOWN. MARKER SHALL BE STAMPED WITH CRUCIAL IDENTIFICATION AS COORDINATED BY ARCHITECT AND EMBLEMATIC. CAN IS LEFT EXPOSED INSTALL A BLACK MARKER FOR FUTURE USE.
 4. CONTRACTOR SHALL PROVIDE A 7' DIA DOME BRONZE MARKER STAMPED WITH THE PLAZA IDENTIFICATION NUMBER AS SHOWN ON THE DRAWINGS.
 5. EACH CAN SHALL HAVE A MINIMUM OF FOUR OPENINGS. LOCATIONS OF OPENINGS CAN BE AT 0, 45, 90, 135, 180 DEGREES. CONTRACTOR SHALL PROVIDE AN ALUMINUM PLATE AT JUNCTION CAN PLAZA CONDUIT OPENINGS AT 45, 135, 225 AND 315 DEGREES WILL HAVE A 3' OFFSET FROM THE CENTERLINE OF THE CAN. THESE CAN SHALL NOT BE OPENINGS PRIOR TO TESTING AND CAN SHALL NOT BE OPENING TOGETHER INSIDE JUNCTION PLAZA. ALL CONDUITS EXTENDING THE CANS SHALL BE REDUCED TO CONDUITS WHICH ARE NOT USED IN THIS PROJECT SHALL BE CAPPED.
 6. CONDUITS WHICH ARE NOT USED IN THIS PROJECT SHALL BE CAPPED 3' OUTSIDE OF PLAZA CONNECTION.
 7. CONTRACTOR SHALL COORDINATE THE ORIENTATION OF THE PLAZA WITH THE ENGINEER AND OAR PRIOR INSTALLATION.
- SEE DETAIL FOR CONNECTION TO JUNCTION CANS.



1. IDENTIFICATION SHALL BE STAMPED USING 1/2" FIGURES AND LETTERS UNIFORMLY SPACED ON THE BRONZE MARKER
2. IDENTIFICATION MARKERS SHALL BE UNIFORMLY INSTALLED INSET TO THE CONCRETE ENVELOPE SURROUNDING BASE CAN.



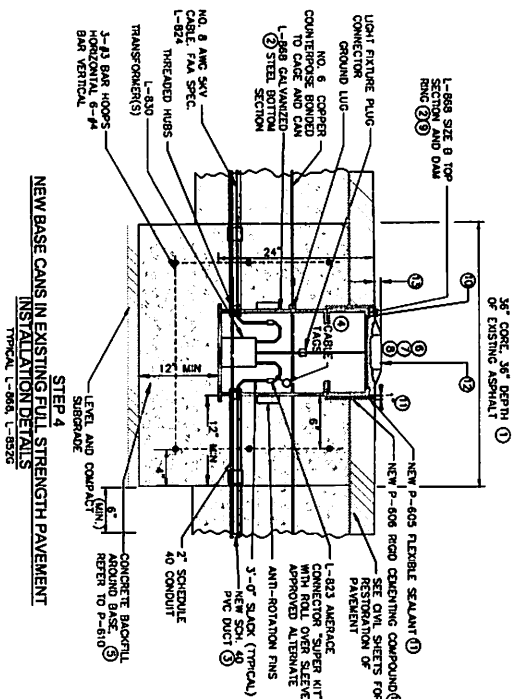
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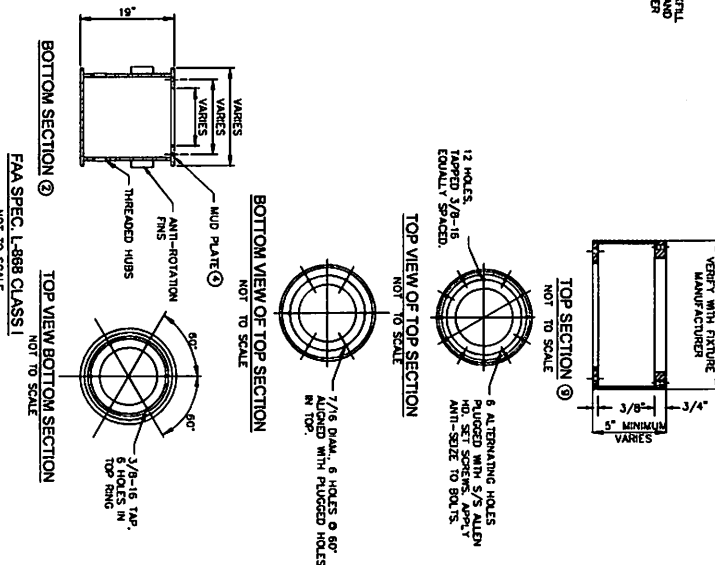
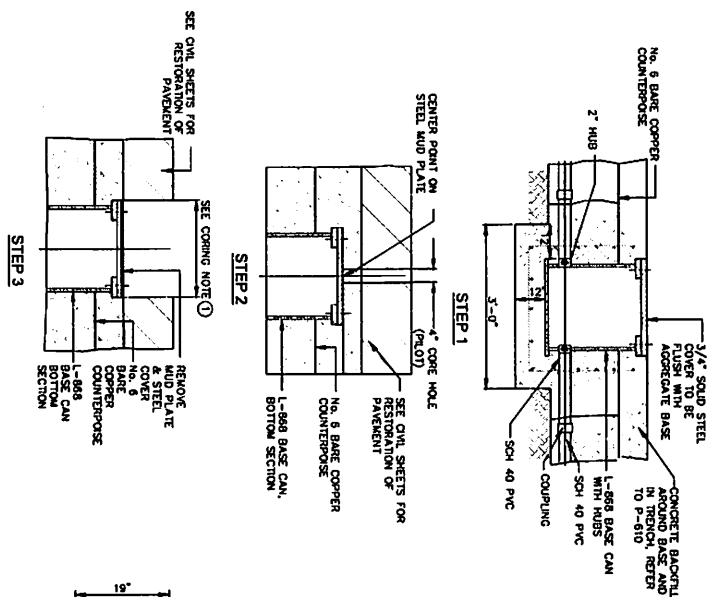
JAMES W. KAPPES

NOTES: MULTIPLE SECTION L-868, BASE CAN

1. FEATURES ARE TO BE INSTALLED IN A 4 STEP PROCESS. SEE LIGHT BASE BOTTOM SECTION NOTES FOR STEP 1, STEP 2 & 3. INSTALLATION SEQUENCE SHALL BE AS DETAILLED IN NOTES 1 THROUGH 3.
2. AFTER THE TOTAL BURNTHOUS PAVEMENT IS INSTALLED, CORE A 4" DIAMETER/DEPTH PILOT HOLE AND LOCATE THE CENTER POINT OF THE STEEL AND PLATE. CORES TO 13 TO 14 1/2" DIA/DEPTH. HOLE CENTERING IS ON THE CENTER POINT OF THE STEEL AND PLATE. (SPACES PLACING RING OR SH) AND STEEL ASSEMBLY SHALL BE PLACED IN THE ANNUAL SPACE AROUND NEW EXTENSION/TOP SECTION TO NEW DIAL RING WITH P-605 RED CEMENTITIOUS COMPOUND AND SEAL AROUND NEW DIAL RING TO TOP OF EDGE OF PAVEMENT RING WITH P-605 FLEXIBLE SEALANT. SEALANT SHALL BE MANUFACTURED BY SHOUS, INC. OR APPROVED EQUAL. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITY SLOOTE (RT116) DENTED 1-58000 BASE, SPACERS AND PLATE RING.
3. THE HEIGHT OF THE 1-5800 EXTENSION SHALL BE DETERMINED AS FOLLOWS:
 - 3.1. RECORD FINAL ELEVATION OF THE TOP AND AT THE HEIGHT OF THE 3/4" STEEL COVER AFTER THE BOTTOM SECTION OF THE BASE HAS BEEN INSTALLED.
 - 3.2. RECORD FINAL ELEVATION OF THE PAVEMENT DIRECTLY ABOVE THE INSTALLED.
 - 3.3. THE EDGE OF THE LIGHT COVER AFTER THE PAVING IS COMPLETE SHALL SURFACE TO (+) OF (-) 1/8" TOLERANCE.
4. DO NOT REUSE SHIPPING OR EXISTING BOLTS. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CARBON STEEL COATED BOLTS OF THE PROPER LENGTH AND INSTALL 2-PIECE LOCK WASHERS SHALL BE FURNISHED WITH THE SPACER RING. WASHERS AND TORQUE TO MANUFACTURER'S INSTRUCTIONS.
5. AFTER FINISH INSTALLATION, CONTRACTOR SHALL FINISH AND INSTALL P-605 FLEXIBLE SEALANT IN SPACE AROUND DIAL RING AND P-605 RED CEMENTITIOUS COMPOUND IN SPACE AROUND THE EXTENSIONS AND SPACERS.
6. CONTRACTOR SHALL SUPPLY AN INSTRUCTION AND MAINTENANCE MANUAL, WITH EACH TYPE OF LIGHT FINISH INSTALLED, AT COMPLETION OF CONTRACT. THE MANUAL WILL BE TURNED OVER TO THE OWNER FOR THEIR USE. ALL COMPONENTS ARE TO BE SUPPORTED DURING CONSTRUCTION WITH FACTORY BUILT SPACERS.
7. THE CONTRACTOR SHALL CONFORM TO THE CURRENT FAA ADVISORY CIRCULARS/FAA 150/2340-30, LATEST EDITION FOR RUNWAY AND TAXIWAY RUN-PAVEMENTS AND INSTALLATION TOLERANCES.



STEP 4



- NOTES:
- ① CORE 3'-0" DIAMETER x 3' DEEP HOLE IN EXISTING PAVEMENT.
- ② INSTALL 2-PIECE FMA APPROVED L-868 BASE CAN
- ③ IF APPLICABLE, CONTRACTOR SHALL REMOVE EXISTING CONCRETE ENCASUREMENT AROUND EXISTING CONDUIT BEYOND 36" CORE AREA AND CONNECT NEW BASE CAN CONDUIT TO NEW/EXISTING CONDUIT SYSTEM AND BACK FILL ACCORDINGLY.
- ④ PROVIDE STEEL AND PLATE FOR BOTTOM SECTION.
- ⑤ INSTALL CONCRETE BASHPIT, REFER TO P-610.
- ⑥ IF APPLICABLE, THE EXTENSION RING AND FUTURE SHALL BE INSTALLED AFTER PAVEMENT GRADING IS COMPLETE. SHOULD THE FUTURE CONDUIT BE REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE REQUIRED MATERIALS AND REMOVING THE CONDUIT FROM THE PAVEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY FUTURE IF IT IS DAMAGED.
- ⑦ MAKE SHALL DIAMETER TEST CORE TO DETERMINE EXACT CENTER OF BASE AND TO DETERMINE REQUIRED HEIGHT OF TOP SECTION.
- ⑧ PROVIDE NEW THROUGH BITUMINOUS SURFACE COURSE
- ⑨ CORE HOLE THROUGH BITUMINOUS SURFACE COURSE
- ⑩ INSTALL NEW L-868 TOP SECTION.
- ⑪ PROVIDE NEW CARBON STEEL COATED BOLTS AND WASHERS FOR ALL MOUNTING BOLTS. ALL BOLTS SHALL EXTEND 3/4".
- ⑫ REMOVE BASE CAN MACHINED THREADED STUDS.
- ⑬ SEAL ANNUAL SPACE AROUND NEW EXTENSION/TOP SECTION TO NEW DWM RING WITH P-606 RING CEMENTING COMPOUND/GROUTING COMPOUND. THE CONTRACTOR SHALL BE RESPONSIBLE TO MANUFACTURE BY STOWING, ON OR TOP EDGE OF PAVEMENT RING WITH P-603 FLEXIBLE SEALANT. SEALANT SHALL BE MANUFACTURED BY STOWING, ON OR APPROVED EQUAL. CONTRACTOR SHALL APPLY A THIN LAYER OF SELF-LEVELLING SLOCOE (FLYBUL) UNDER L-868 BASE, SPACERS, AND PLATE RING.
- ⑭ INSTALL RUSH MOUNTED FUTURE, SEE RUSH FUTURE ELEVATION DETAIL.
- ⑮ STILE 2 FUTURE SHALL BE A MAX OF 1/2" ABOVE GRADE. STILE 3 FUTURE SHALL BE A MAX OF 1/4" ABOVE GRADE

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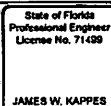
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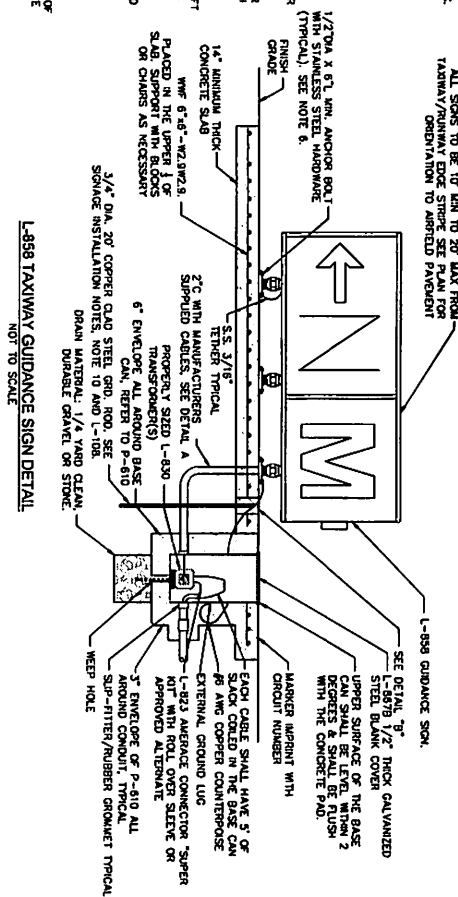
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| DRAWN BY: JMK | | DATE: 5/4/2022 | State of Florida Professional Engineer License No. 71499 |
| DESIGNED BY: JMK | | SCALE: AS NOTED | |
| CHECKED BY: A.L.C. | | | |
| FIELD BOOK: | | | |
| | | | JAMES W. KAPPES |



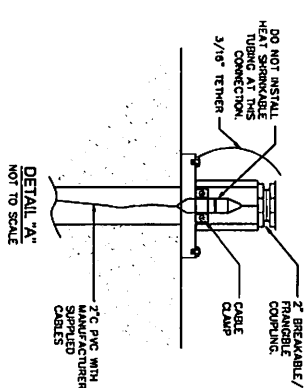
SIGN INSTALLATION NOTES

1. SPOB IDENTIFICATION STUDERS, MATERIALS, SIGN BASE DETAILS, ETC SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. THE CONCRETE SHALL COMPLY WITH P-610 SPECIFICATION, CLASS II.
3. P-610 CONCRETE STEEL REINFORCEMENT SHALL BE TYPE A191 AISI GRADE 60. ALL REINFORCEMENTS SHALL HAVE A 7' MINIMUM DEVELOPMENT LENGTH. REBAR ORIENTATION CAN BE ADJUSTED TO MEET INTERFERENCES.
4. FOR LOCATION AND ORIENTATION OF SIGN AND FOUNDATION SEE PLANS.
5. THE ORIENTATION, INSTALLATION AND DEPTH OF THE 2" CONDUIT FOR SIGN CORDS SHALL BE COORDINATED WITH THE PLANS.
6. METHODS OF ATTACHMENT INCLUDING BOLT PATTERNS, ANCHOR LEGTHS AND ATTACHMENT DETAILS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. ALL SIGNS SHALL BE INSTALLED WITH TETHERS ON A MAXIMUM OF 2 FEET PER SIGN. TETHERS SHALL BE 3/16" STAINLESS STEEL ANCHORED TO THE SIGN FRAME ON BOTH EDGES. THE TETHER SHALL BE SECURED TO THE SIGN FRAME USING 1/8" DIA. U-BOLTS (UNF), WHICH ARE ATTACHED BETWEEN SPAN AND THE RATTING PLATE.
8. SIZE, VARY PLATE VIEW, GRADES AND FILL DETAILS AND DETAILS A AND B ARE TYPICAL FOR ALL SIGNS.
9. ALL CONDUIT SHALL BE 2" SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR SHALL VERIFY THAT THE 4" SLACK IS LARGE ENOUGH TO ACCOMMODATE THE EXPANSIVE CONNECTION. THE TOP OF THE GROUND ROD SHALL BE FLUSH WITH THE TOP OF THE SLAB. THE GROUND ROD SHALL NOT BE RUN AFTER THE GROUNDING CONNECTION HAS BEEN MADE.
11. ALL SIZE 1 SIGNS SHALL BE INSTALLED AT 15' FROM THE DEFINED EDGE OF PAVEMENT TO THE NEAREST EDGE OF THE EXISTING SIGN AREA. THE SIGN SHALL BE SET BACK FROM THE ROADWAY CENTERLINE DUE TO AN OBSTRUCTION, A MINIMUM DISTANCE OF 10 TO 20 FEET FROM THE NEAREST SIDEWALK OR DRIVEWAY. THE SIGN SHALL BE SET BACK FROM THE DEFINED EDGE OF PAVEMENT TO THE NEAREST EDGE OF THE EXISTING SIGN FRAME IS ALLOWED AS STATED IN FAA AC150/5340-18 LATEST EDITION. SIGNS SHALL BE REMOVED BY THE BIDDER PRIOR TO INSTALLATION.
12. THE SIGN TETHER AND BRACING CONDUCTOR SHALL NOT BE ATTACHED TO THE SIGN FRAME. THE BRACING CONDUCTOR SHALL BE USED TO CONNECT THE BRACING CONDUCTOR TO THE SIGN PLANE AND SIGN. THE TETHERS AND BRACING CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO ALLOW THEM TO BE REMOVED WITHOUT DAMAGING THE SIGN PLATES AND TO ALLOW THE DOOR TO OPEN UPON THE SIGN PLATS OVER.
13. STRUCTURAL FILL FOR SIGN CONCRETE FOUNDATION PLATS SHALL BE 10% CRUSHED GRANULAR FILL. THE SIGN PLAT SHALL BE 12" THICK. MAXIMUM LIMITS NOT TO EXCEED 4" IN LONGE DEPTH AND COMPACTED TO DESIRED MAXIMUM DENSITY AT 10 TO 25 ABOVE OPTIMUM VALUES AS DETERMINED BY ASTM D698. PAYMENT FOR DIMENSIONAL MATERIALS SHALL BE PAID SEPARATELY. THE SIGN PLATE SHALL BE 12" THICK. THE SIGN PLATE SHALL NOT EXCEED 120 IN ANY DIMENSION OF THE THICKNESS.
14. ALL AREAS FOR THE LEG PLANGE PLATS SHALL BE IN THE SAME PLACE.
15. FINISHED BURIAL DEPTH OF 2" SCHEDULE 40 PVC CONDUIT IS 24" TO INSURE BURIAL DEPTH.

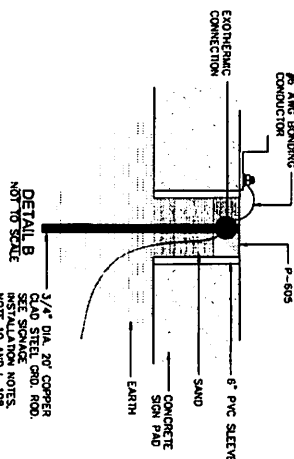
ALL SONS TO BE 10' MIN TO 20' MAX FROM
TADWAY/RUNWAY EDGE STRIPE SEE PLAN FOR
ORIENTATION TO AIRFIELD PAYEMENT



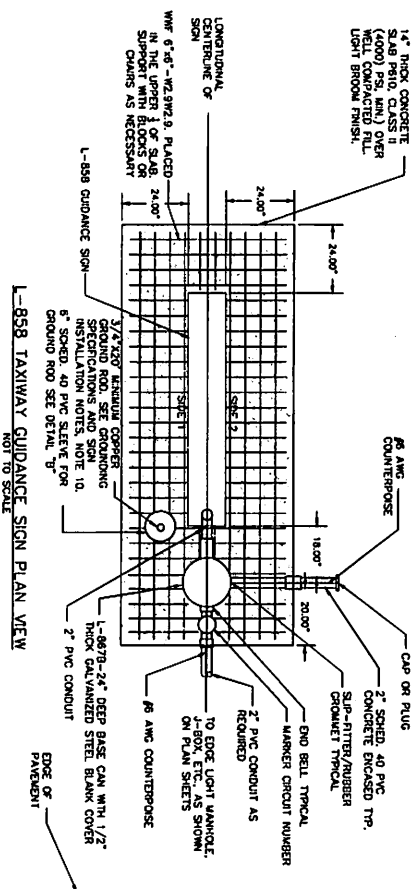
L-858 TAXIWAY GUIDANCE SIGN DETAIL
NOT TO SCALE



DETAIL "A"
NOT TO SCALE



DETAIL B
NOT TO SCALE



1-858 TAXIWAY GUIDANCE SIGN PLAN VIEW
NOT TO SCALE

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One-time donors are encouraged to
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info@embryology.com

QUANTUM
Laser Physics & Engineering

BID SET

**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL DETAILS**

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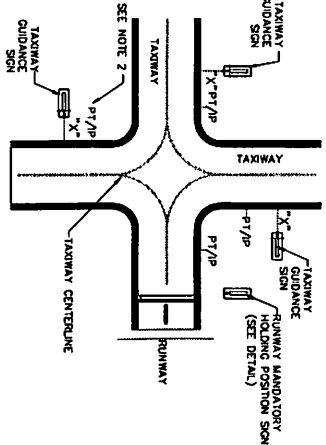
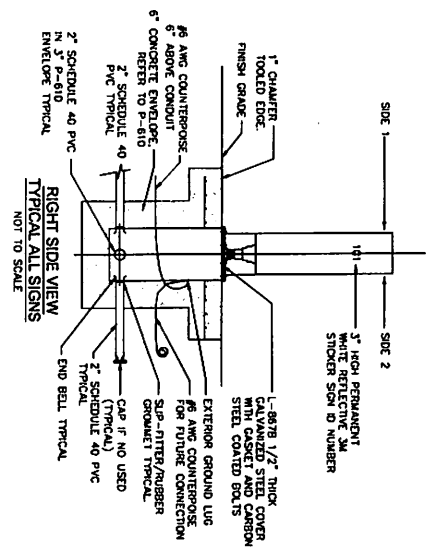
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33300

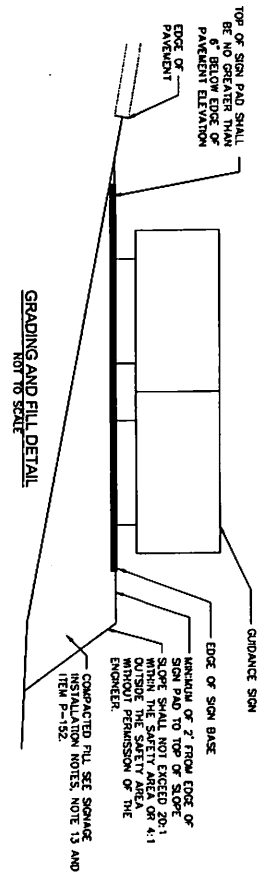
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| DRAWN BY: JWK | DATE: 5/4/2022 |
| DESIGNED BY: JWK | SCALE: AS NOTED |
| CHECKED BY: ALC | |
| FIELD BOOK: | |

**State of Florida
Professional Engineer
License No. 71499**

JAMES W. KAPPE

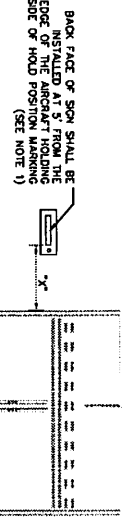


GUIDANCE SIGN TYPICAL OFFSET AND POSITIONS
EXAMPLE OF A PERPENDICULAR TAXIWAY CONNECTOR LESS THAN 150' WIDE
"X" = OFFSET DISTANCE FROM DEFINED PAVEMENT EDGE (OUTSIDE EDGE OF OUTBOARD STRIP) TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME.
SIZE 1 SIGNS = 15'



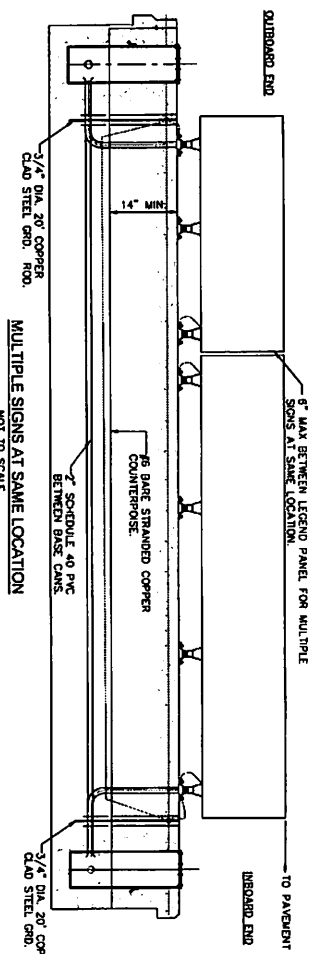
SIGN LAYOUT AND OFFSET NOTES:

1. MANDATORY HOLDING POSITION SIGNS SHALL BE LOCATED 5' FROM THE FIRST STRIP CLOSEST TO THE TAXIWAY CENTERLINE OF THE HOLDING POSITION MARKINGS WITH A TOLERANCE OF 0/4\"/>
2. RUNWAY EXIT SIGNS AND TAXIWAY GUIDANCE SIGNS SHALL BE TYPICALLY LOCATED 15' PRIOR TO THE POINT OF TANGENCY (PT)/INTERSECTION (POINT). SEE GEOMETRY PLANS FOR PT/P LOCATIONS. ALL SIGNS SHALL BE INSTALLED IN THE CORNER AND THE FINAL LOCATION APPROVED BY AIRP PRIOR TO INSTALLATION.
3. ALL SIZE 1 SIGNS SHALL BE INSTALLED AT 15' FROM THE DEFINED EDGE OF PAVEMENT. IF THE SIGN IS INSTALLED AT A DISTANCE GREATER THAN 15' FROM THE DEFINED EDGE OF PAVEMENT, A TOLERANCE OF 10 TO 20 FEET FROM THE DEFINED EDGE OF PAVEMENT TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME IS ALLOWED AS STATED IN FAA AC150/5340-18 LATEST EDITION.



RUNWAY MANDATORY HOLDING POSITION SIGN LAYOUT DETAIL
EXAMPLE OF A PERPENDICULAR TAXIWAY CONNECTOR LESS THAN 150' WIDE
NOT TO SCALE

"X" = OFFSET DISTANCE FROM DEFINED PAVEMENT EDGE (OUTSIDE EDGE OF OUTBOARD STRIP) TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME.
SIZE 1 SIGNS = 15'



MULTIPLE SIGNS AT SAME LOCATION
NOT TO SCALE



QUANTUM
ENGINEERING & ARCHITECTURE
12708 E16-DET 1-14-20

BID SET

| |
|---|
| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS ELECTRICAL DETAILS |
| DATE: 5/4/2022 |
| BY: JWC |
| CHKD: JWC |
| APPD: JWC |
| SCALE: AS NOTED |
| FIELD BOOK: 1-14-20 |

| REVISIONS | | | |
|-----------|------|----|-------------|
| NO. | DATE | BY | DESCRIPTION |
| | | | |
| | | | |
| | | | |



CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|------------------|---------------------|
| DESIGN BY: JWC | DATE: 5/4/2022 |
| DESIGNED BY: JWC | SCALE: AS NOTED |
| CHECKED BY: JWC | FIELD BOOK: 1-14-20 |

| |
|---|
| State of Florida Professional Engineer License No. 71489 JAMES W. KAPPEL |
|---|

LIGHTED SIGN PANEL REPLACEMENT SCHEDULE

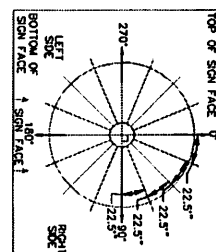
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NEW LIGHTED SIGN PANEL SCHEDULE

| NEW LIGHTED SIGN PANEL SCHEDULE | | | | | | | | | |
|---------------------------------|-------------------|------|-------|--------|---|-------------------------------------|-----------|---------|--|
| SIGN NO. | NO. OF CHARACTERS | SIZE | STYLE | COLOR | | CIRCUIT | SHEET NO. | REMARKS | |
| | | | | Letter | Side 1, U.C.H.D. | | | | |
| 134 | 4 | 1 | 2 | LED | <div><div>L</div><div>A</div><div>Y</div></div> | <div><div>B</div></div> | A | | |
| 345 | 7 | 1 | 2 | LED | <div><div>L</div><div>Y</div><div>A1↑</div></div> | <div><div>B</div></div> | E | | |
| 346 | 3 | 1 | 2 | LED | <div><div>B</div></div> | <div><div>L</div><div>Y</div></div> | E | | |
| 347 | 6 | 1 | 2 | LED | <div><div>Y</div><div>Y</div><div>LED</div></div> | <div><div>L</div><div>B</div></div> | E | | |
| 348 | 4 | 1 | 2 | LED | <div><div>E</div><div>Y</div><div>A1↑</div></div> | <div><div>B</div></div> | E | | |

ARROW ROTATION ANGLE DATA AS

VIEWED LOOKING AT SIGN FACE



SIGN PANEL NOTES:

1. ARROWS INDICATE DIRECTION OF TABYANVS.
2. IT IS THE RESPONSIBILITY OF CONTRACTOR TO ENSURE THAT THE DIRECTIONAL ARROWS ON ANGLED TABYANVS (NOT 90°) MATCHES CENTRIFUGAL OR REFERENCE DIRECTION TO THE NEAREST 22.5° SEE ROSE COMPASS FOR GUIDANCE.
3. CONTRACTOR SHALL PROVIDE ALL SIGN LEGENDS AND BLANK PANELS REQUIRED BY THE SIGN PANEL SCHEDULE, MANUFACTURER AND FAA AC905/3340-18, LATEST EDITION.
4. CONTRACTOR SHALL PROVIDE MESSAGE DIRECTION ON NEW AND EXISTING SIGNAGE. DIVIDERS SHALL BE INCLUSIVE TO THE LINE IT/MS FOR SIGNAGE.
5. SIGNS SHALL BE PAID BY CHARACTER, UNLESS OTHERWISE INDICATED. ONE CHARACTER SHALL BE DEFINED AS 1 LETTER, NUMERAL OR SPECIAL CHARACTER/PUNCTUATION REGARDLESS OF TEXT OR BACKGROUND COLOR. DIVIDERS SHALL BE PAID BY CHARACTER, UNLESS OTHERWISE INDICATED. GREATER NUMBER OF CHARACTERS AND SHALL NOT ACCOUNT FOR MESSAGE DIVIDERS OR CHANGE OF BACKGROUND COLOR. PANELS FOR BOTH SIDES OF SIGN SHALL BE INCLUSIVE TO THE LINE ITEM.

SIGN LEGEND NOTES

SIGN TYPES

- L = TAX LOCATION SIGN, BLACK BACKGROUND WITH YELLOW LETTERING AND A YELLOW BORDER
- O = RUNWAY OBSTRUCTION SIGN, BLACK BACKGROUND WITH WHITE LETTERING
- Y = TAXIWAY DIRECTION SIGN, YELLOW BACKGROUND WITH BLACK LETTERING
- R = MANDATORY HOLD SIGN, RED BACKGROUND WITH WHITE LETTERING OUTLINED IN BLACK
- I = INFORMATIONAL SIGN WITH YELLOW BACKGROUND WITH BLACK LETTERING

Factory Options
Kendall-Turner and Associates Inc.
Orlando • 800-451-2222
Fax • 407/241-1111
www.kendallturner.com

QUANTUM

BID SET

**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
ELECTRICAL DETAILS**

[illegible]

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|---------------------|--------------------|
| DRAWN BY: JWK | DATE: 5/4/2022 |
| DESIGNED BY: JWK | SCALE: AS NOTED |
| CHECKED BY: ALC | |
| FIELD BOOK: | |

State of Florida
Professional Engineer
License No. 71499

JAMES W. KAPPE

[illegible]

State of Florida
Professional Engineer
License No. 71492

JAMES W. KAPPES

BID NO. 12679-623 SPECIFIC REFERENCES FORM

The Contractor shall provide references for at least three (3) airfield construction projects that are of similar scope and budget within the last ten (10) years.

Bidder shall also demonstrate successful completion of a minimum of three (3) projects of similar scope and scale (or larger) and shall, for each project listed, identify location; dates of construction; project name and overall scope; scope of work that was self-performed by Contractor; and client's name, address, telephone number and e-mail address.

Note: Do not include proposed team members or parent/subsidiary/affiliated companies as references in your submittals.

A. PRIME BIDDER'S NAME: _____

CLIENT NO.1 - Name of firm to be contacted: _____

Address: _____

Contact Person: _____

Phone No: (____) _____

Contact E-Mail Address: _____

Project Performance Period: _____ to _____
Dates should be in mm/yy format

Project Name : _____

Location of Project: _____

Description of the overall scope: _____

Description of work that was self-performed by Bidder:

CLIENT NO.2 - Name of firm to be contacted: _____

Address: _____

Contact Person: _____

Phone No: () _____

Contact E-Mail Address: _____

Dates should be in mm/yy format

Project Name : _____

Location of Project: _____

Description of the overall scope: _____

Description of work that was self-performed by Bidder:

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook page.

CLIENT NO.3 - Name of firm to be contacted: _____

Address: _____

Contact Person: _____

Phone No: () _____

Contact E-Mail Address: _____

Dates should be in mm/yy format

Project Name : _____

Location of Project: _____

Description of the overall scope: _____

Description of work that was self-performed by Bidder:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

QUESTIONNAIRE SHEET

PLEASE PRINT OR TYPE:

Firm Name:

President

Business Address:

Telephone:

Fax:

E-Mail Address:

What was the last project of this nature which you completed? Include the year, description, and contract value.

The following are named as three corporations and representatives of those corporations for which you have performed work similar to that required by this contract, and which the City may contact as your references (include addresses, telephone numbers and e-mail addresses). Include the project name, year, description, and contract value.

How many years has your organization been in business?

Have you ever failed to complete work awarded to you; if so, where and why?

The name of the qualifying agent for the firm and his position is:

Certificate of Competency Number of Qualifying Agent:

Effective Date:

Expiration Date:

Licensed in:

Engineering Contractor's License #

(County/State)

Expiration Date:

NOTE: To be considered for award of this contract, the bidder must submit a financial statement upon request.

NOTE: Contractor must have proper licensing and shall provide copy of same with his proposal.

QUESTIONNAIRE SHEET

1. Have you personally inspected the proposed work and have you a complete plan for its performance?

//

2. Will you sublet any part of this work? If so, list the portions or specialties of the work that you will.

a)

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g)

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3. What equipment do you own that is available for the work?

//

4. What equipment will you purchase for the proposed work?

//

5. What equipment will you rent for the proposed work?

//

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

| <u>NAME</u> | <u>RELATIONSHIPS</u> |
|-------------|----------------------|
| <div></div> | <div></div> |

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

| | |
|---------------------------------|------------------|
| <div>Authorized Signature</div> | <div>Title</div> |
| <div>Name (Printed)</div> | <div>Date</div> |

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Authorized Signature

Print Name and Title

Date

CONSTRUCTION BID CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the Department of State, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration) _____

Address: _____

City: _____

State: _____

Zip: _____

Telephone No.: _____

FAX No.: _____

Email: _____

Check box if your firm qualifies for MBE / SBE / WBE: ☐

If a corporation, state the name of the President, Secretary and Resident Agent. If a partnership, state the names of all partners. If a trade name, state the names of the individuals who do business under the trade name.

Name

Title

Name

Title

Name

Title

Name

Title

ADDENDUM ACKNOWLEDGEMENT - Bidder acknowledges that the following addenda have been received and are included in the proposal:

| Addendum No. | Date Issued | Addendum No. | Date Issued | Addendum No. | Date Issued |
|--------------|-------------|--------------|-------------|--------------|-------------|
| | | | | | |

VARIANCES: If you take exception or have variances to any term, condition, specification, or requirement in this bid you must specify such variance in the space provided below or reference in the space provided below all variances contained on other pages within your bid. Additional pages may be attached if necessary. No variances will be deemed to be part of the bid submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. You must also click the "Take Exception" button.

//

The below signatory affirms that he has or will obtain all required permits and licenses from the appropriate agencies, and that his firm is authorized to do business in the State of Florida. The below signatory agrees to furnish all labor, tools, material, equipment and supplies, and to sustain all the expense incurred in doing the work set forth in strict accordance with the bid plans and contract documents at the unit prices indicated if awarded a contract. The below signatory has not divulged to, discussed, or compared this bid with other bidders, and has not colluded with any other bidder or parties to this bid whatsoever. Furthermore, the undersigned guarantees the truth and accuracy of all statements and answers contained in this bid. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a bid, that in no event shall the City's liability for bidder's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Name (printed)

Signature

Date

Title

Revised 4/28/2020



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

BID NO. 12679-623
FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP
AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS
(P12708)

ADDENDUM NO. 1

ISSUED: May 12, 2022

This Addendum is being issued to provide the following information. It is hereby made a part of the Plans and Specifications and shall be included with all contract documents.

Acknowledge receipt of this Addendum by inserting its number and date on the CITB Construction Bid Certification Page.

DELETE: Construction Safety & Phasing Plan, Appendix A
Delete the drawing plans in Appendix A of the Construction Safety and Phasing Plan, and replace with the attached.

All other terms, conditions, and specifications remain unchanged.

Maureen Lewis, MBA, P2P08
Senior Procurement Specialist

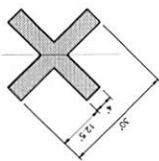
Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

CONSTRUCTION SAFETY NOTES

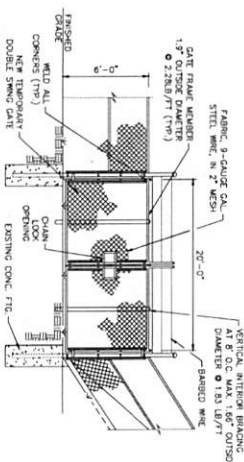
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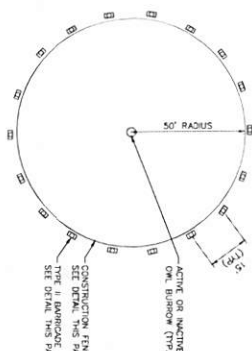
CLOSED TAXIWAY MARKER NOTES:

1. TEMPORARY CLOSED TAXWAY MARKER SHALL BE CONSTRUCTED OF AN EASY TO REMOVE MATERIAL, SUCH AS PLYWOOD, AND BE PLACED IN THE CENTER OF THE ROAD IN PLACE WITH SAND BARS PAINTED YELLOW. TEMPORARY CLOSED TAXWAY MARKER SHALL BE YELLOW IN COLOR.
2. THE CONTRACTOR SHALL PLACE TEMPORARY CLOSED TAXWAY MARKER TO BE CLOSED AS SHOWN ON PLANS OR AS DIRECTED BY THE OWNER.
3. NO PAYMENT WILL BE MADE FOR RELOCATIONS OF TEMPORARY CLOSED TAXWAY MARKER.
4. PAYMENT FOR ITU IS INCLUDED IN 5-107. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

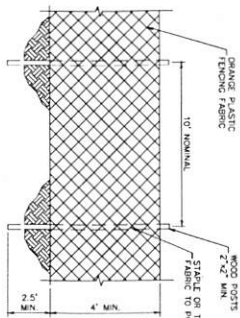
TEMPORARY TAXIWAY CLOSURE MARKER



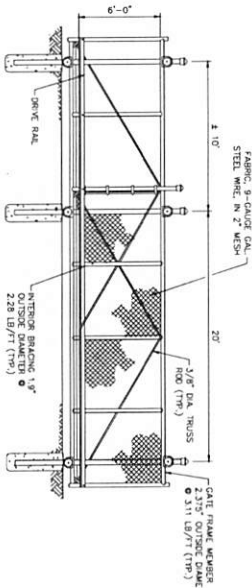
TEMPORARY SECURITY DOUBLE SWING GATE



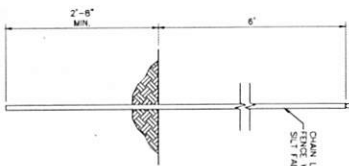
BURROWING OWL FENCING PROTECTION DETAIL
M.T.S.



CONSTRUCTION FENCE DETAIL



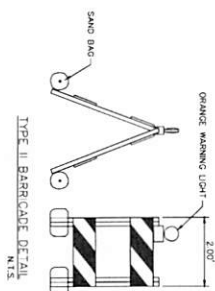
TEMPORARY SLIDE GATE DETAIL



TEMPORARY SECURITY FENCE DETAIL

LOW LEVEL AIRFIELD BARRICADE DETAIL & NOTES
M.T.S.

- [illegible]




MTS



BID SET

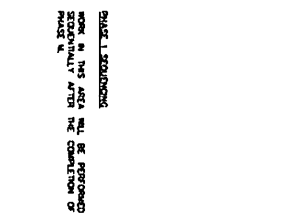
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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| DRAWN BY: ALB | DATE: 05/04/2021 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFC | |
| FIELD BOOK: | |

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Professional Engineer
License No. 62478

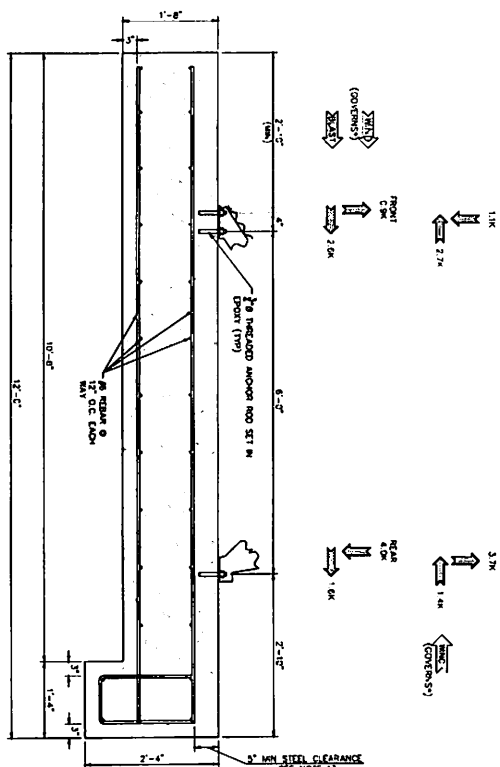
THOMAS F.
O'DONNELL



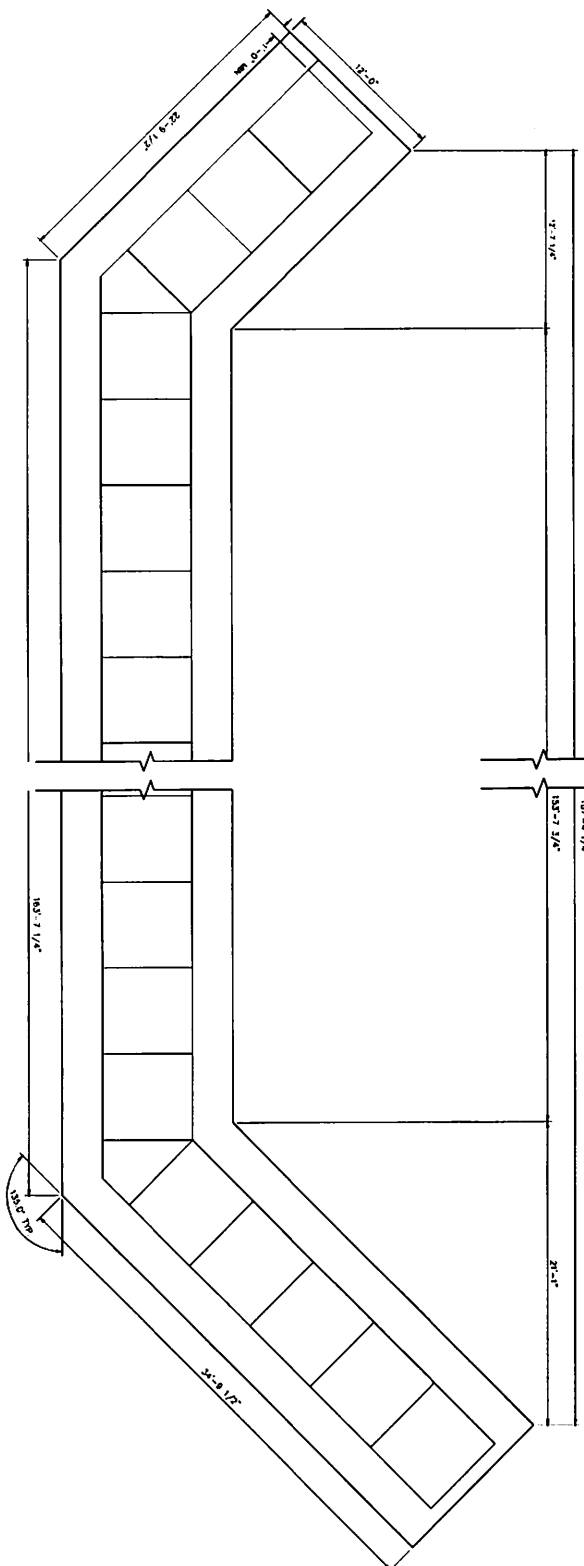
State of Florida
Professional Engineer
License No. 62478

THOMAS E.

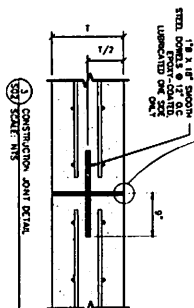
2 CBR-6 FOUNDATION SECTION VIEW
50% SCALE: NTS



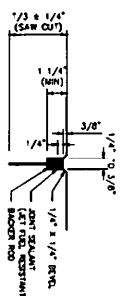
BLAST FENCE FOUNDATION PLAN VES
201 SCALE: NTS



3 CONSTRUCTION JOINT DETAIL
502 SCALE: NTS



4 CONTRACTION JOIN" DETAIL
502 SCALE: NTS



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| SHEET NO 502 OF 70 | TOTAL 109 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS BLAST FENCE |
| JOB FILE 502 BLAST FENCE | DRAWING FILE NO 4-103-40 | |

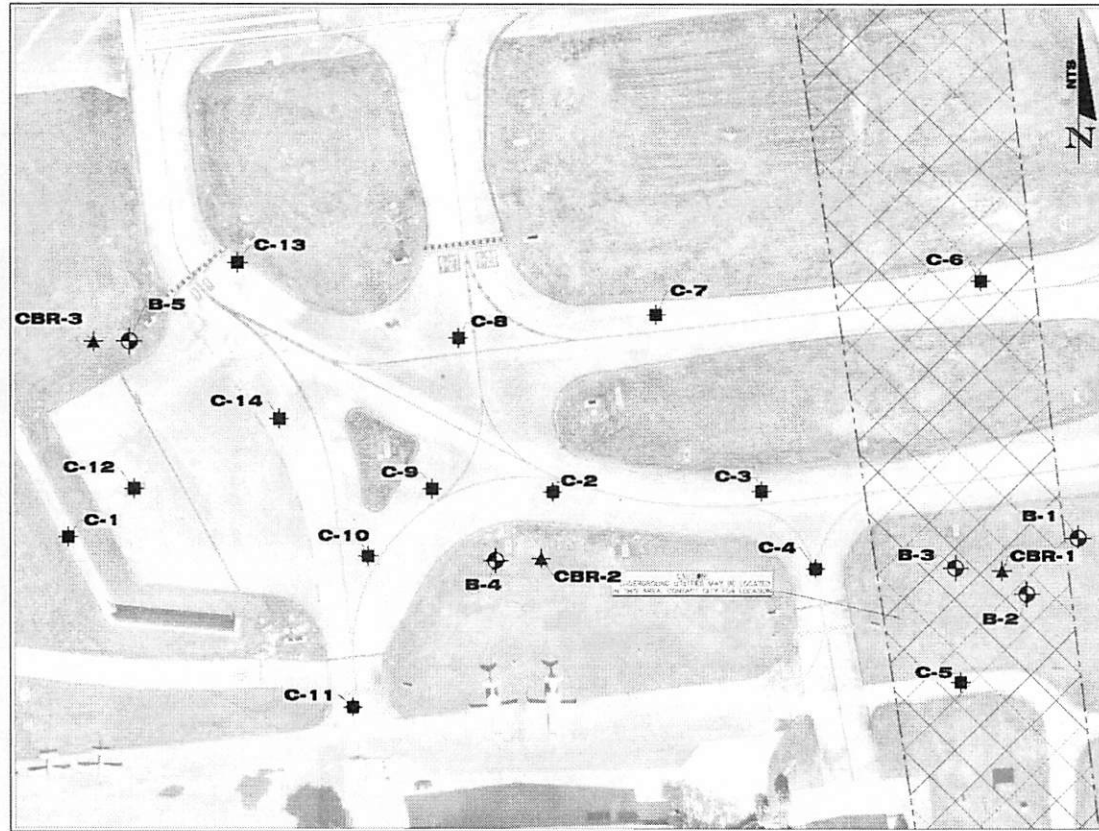
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| DRAWN BY: ALS | DATE: 05/04/202 |
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| CHECKED BY: TFO | |
| FIELD BOOK | |

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License No. 62478

THOMAS F.
O'DONNELL

**BORINGS LOCATION PLAN**

- Approximate Location of SPT Boring
- Approximate Location of Pavement Cores
- Approximate Location of CBR Sampling

DRAWN BY:
NGCHECKED BY:
HB
10/3/2022 2:36 PMAPPROVED BY:
HBDATE:
2/10/2022

ENGINEER OF RECORD:

HARMON BENNETT, P.E.
FLORIDA LICENSE NO.:
53130TIERRA SOUTH FLORIDA
2765 VISTA PARKWAY, STE-10
WEST PALM BEACH, FL 33411

SCALE:

NTS

PROJECT NUMBER:

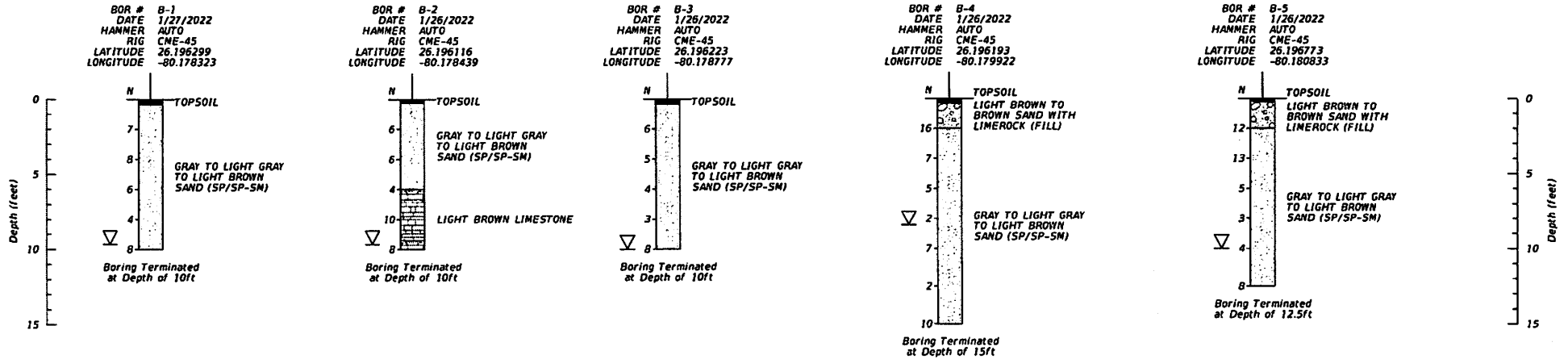
7111-21-542

BORING LOCATION PLAN
DESIGN RUNWAY 9 RUN-UP AREA
RELOCATION AND SOUTH END
TAXIWAY INTERSECTION
FORT LAUDERDALE, FLORIDA

Sheet:

1

p. 597



DRAWN BY:
NG
CHECKED BY:
HB
10/3/2022 2:36 PM

APPROVED BY:
HB
DATE:
2/10/2022

ENGINEER OF RECORD:
HARMON BENNETT, P.E.
FLORIDA LICENSE NO.:
53130



TIERRA SOUTH FLORIDA
2765 VISTA PARKWAY, STE-10
WEST PALM BEACH, FL 33411

SCALE:
NTS

PROJECT NUMBER:
7111-21-542

SOIL PROFILE
DESIGN RUNWAY 9 RUN-UP AREA
RELOCATION AND SOUTH END
TAXIWAY INTERSECTION
FORT LAUDERDALE, FLORIDA

Sheet:
2

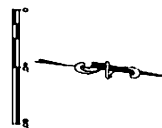


ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1985 (NAVD 83)

DATE OF SURVEY: 10/19/2021

DATE OF SIGNATURE: 10/19/2021

SURVEYOR SEAL



City of Fort Lauderdale

10-10-2020

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| PROJECT NO. | 12522 |
| SHEET NO. | 2 |
| TOTAL | 2 |
| DATE | 10/19/2021 |
| BY | DAVID A. STONER |
| CHECKED BY | DAVID A. STONER |
| DATE | 10/19/2021 |

PROJECT # 12522
FORT LAUDERDALE EXECUTIVE AIRPORT
RUNWAY 9 RUN-UP AREA RELOCATION
& SOUTH END TAXIWAY IMPROVEMENTS
TOPOGRAPHIC SURVEY

| REVISIONS | | | | |
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| SCALE | 01/19/2022 |
| CHECKED BY | 1" = 40' 11" |
| FIELD BOOK | 1149, PAGES 1 3 |

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| ENGINEER | DATE |
| 10/19/2021 | 10/19/2021 |
| 10/19/2021 | 10/19/2021 |
| 10/19/2021 | 10/19/2021 |

GENERAL INSTALLATION NOTES

GENERAL INSTALLATION NOTES

- [illegible]

- Embryofetuses**
Kathryn Mott and Associates, Inc.
One of our embryofetuses for
sale is for sale. It is a male, 4-5
mm, 10-12 weeks old.
Embryofetuses.

[illegible]

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| E01 | |
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| CAD FILE: | |
| 12705-E01-NOTE | |
| DRAWING FILE NO. | |

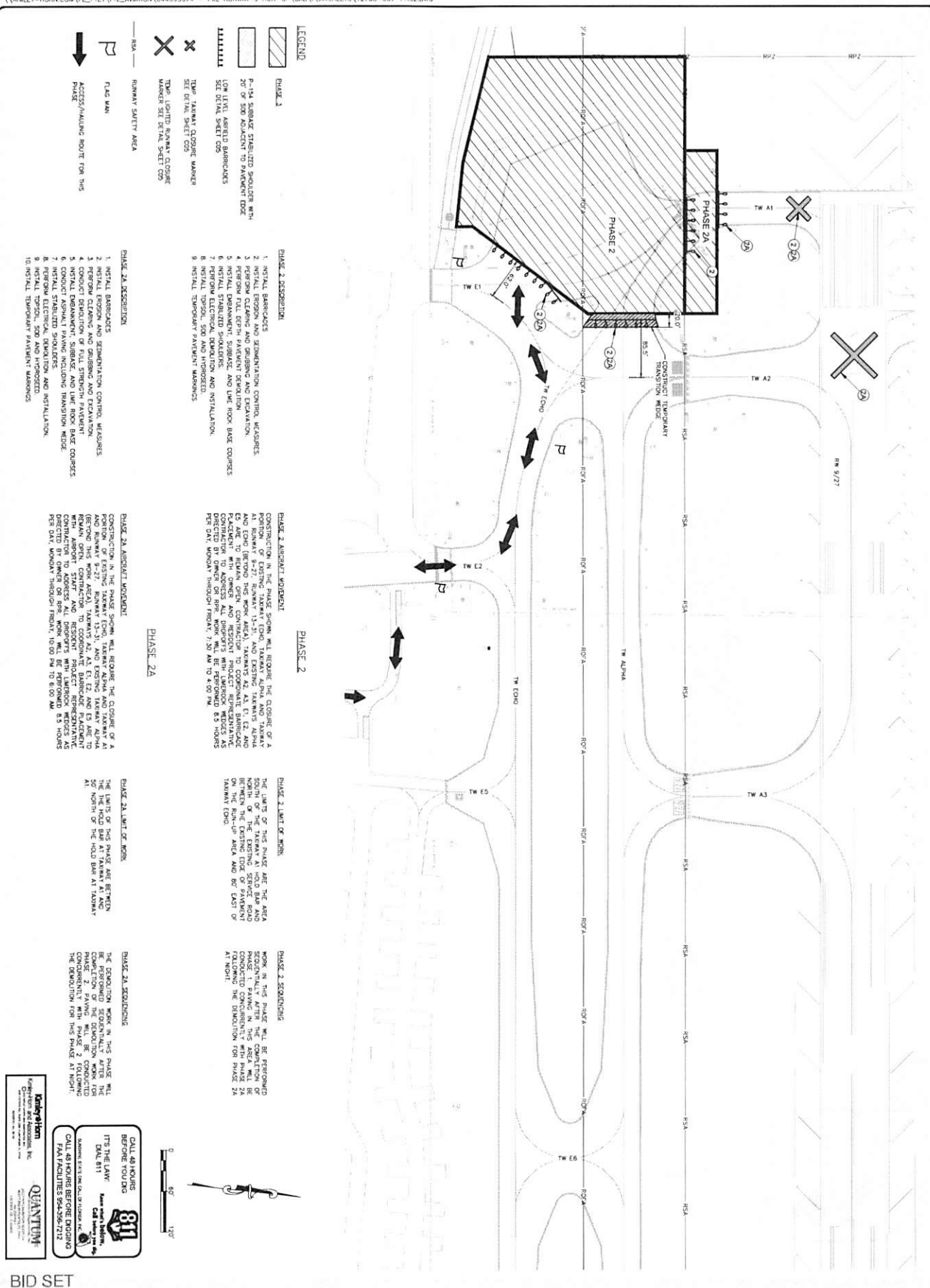
[illegible]

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

State of Florida
Professional Engineer
License No. 71499

JAMES W. KAPPES


JAMES W. KAPPES



BID SET

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|---|---|
| SHEET NO. 07 C07 TOTAL 74 C&G FILE 12708-C07-08NC DRAWN FILE NO. 4-143-40 | PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PHASING PLAN 2 |
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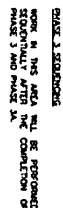
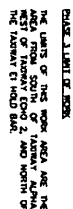
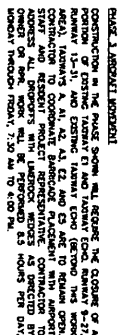
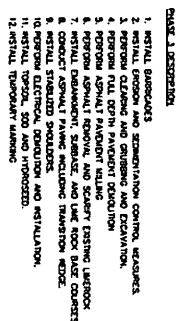
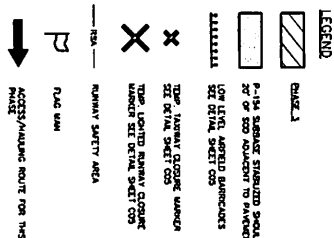
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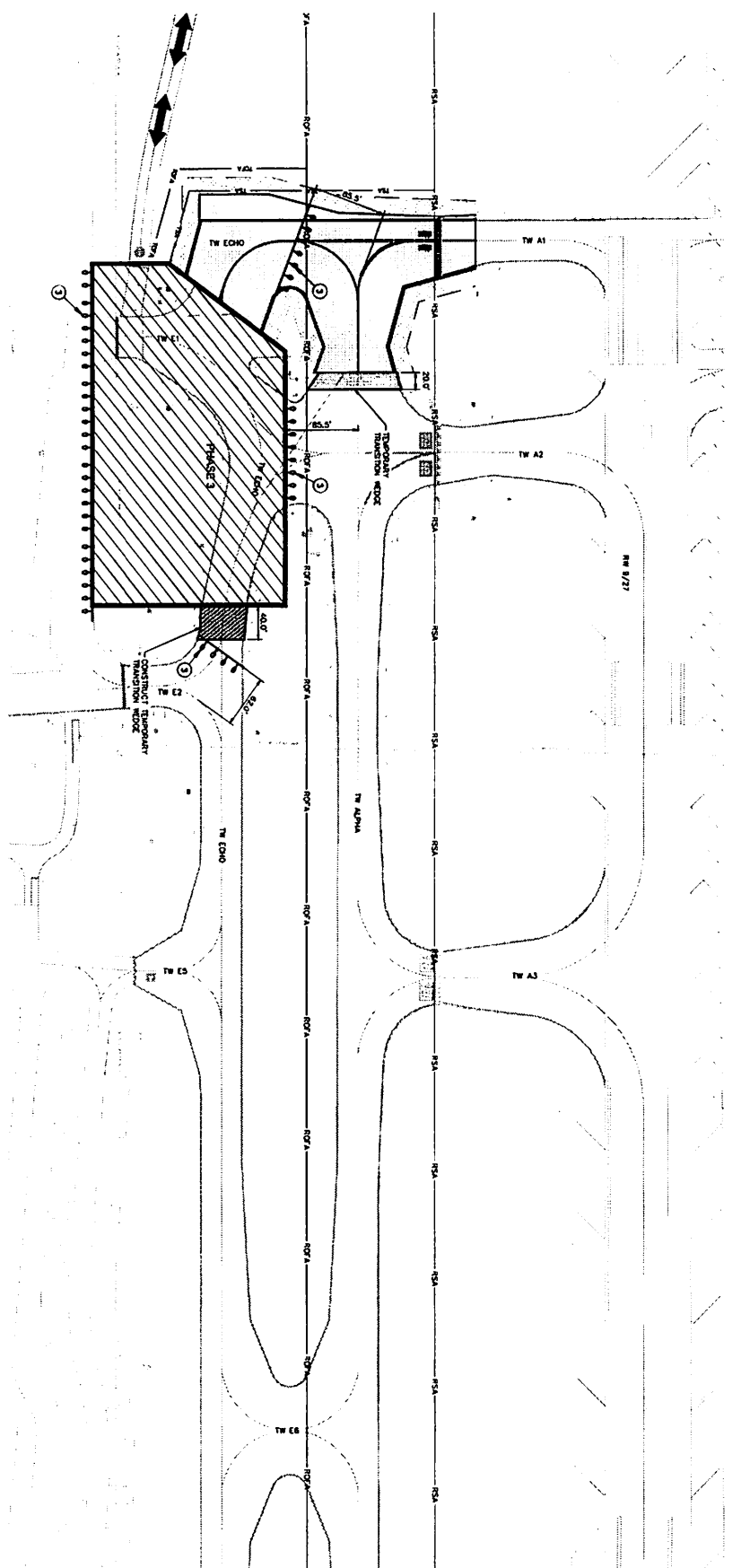
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| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK: | |

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Professional Engineer
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THOMAS F.
O'DONNELL



PHASE 3



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**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
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PHASING PLAN 3**

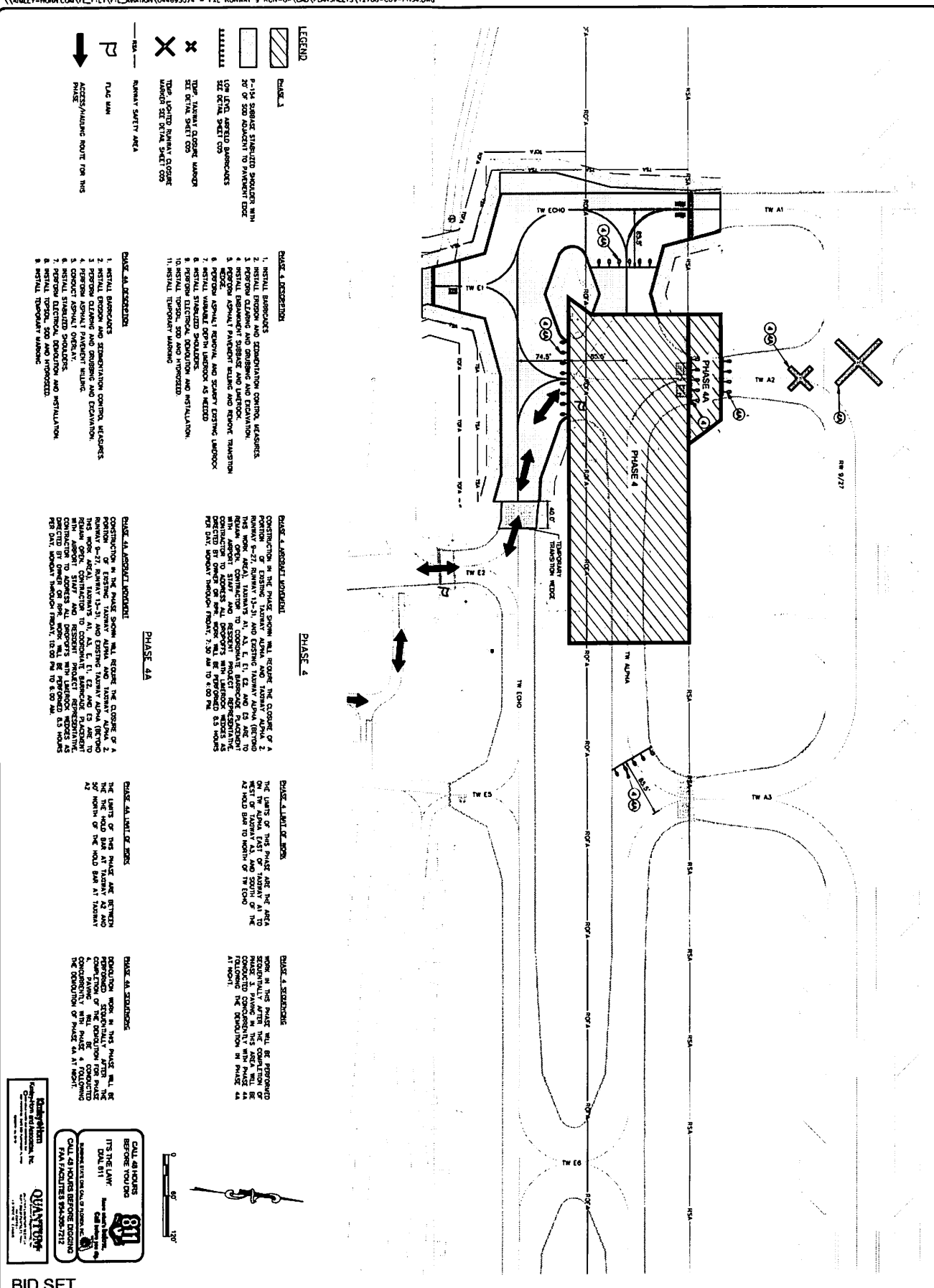
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 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

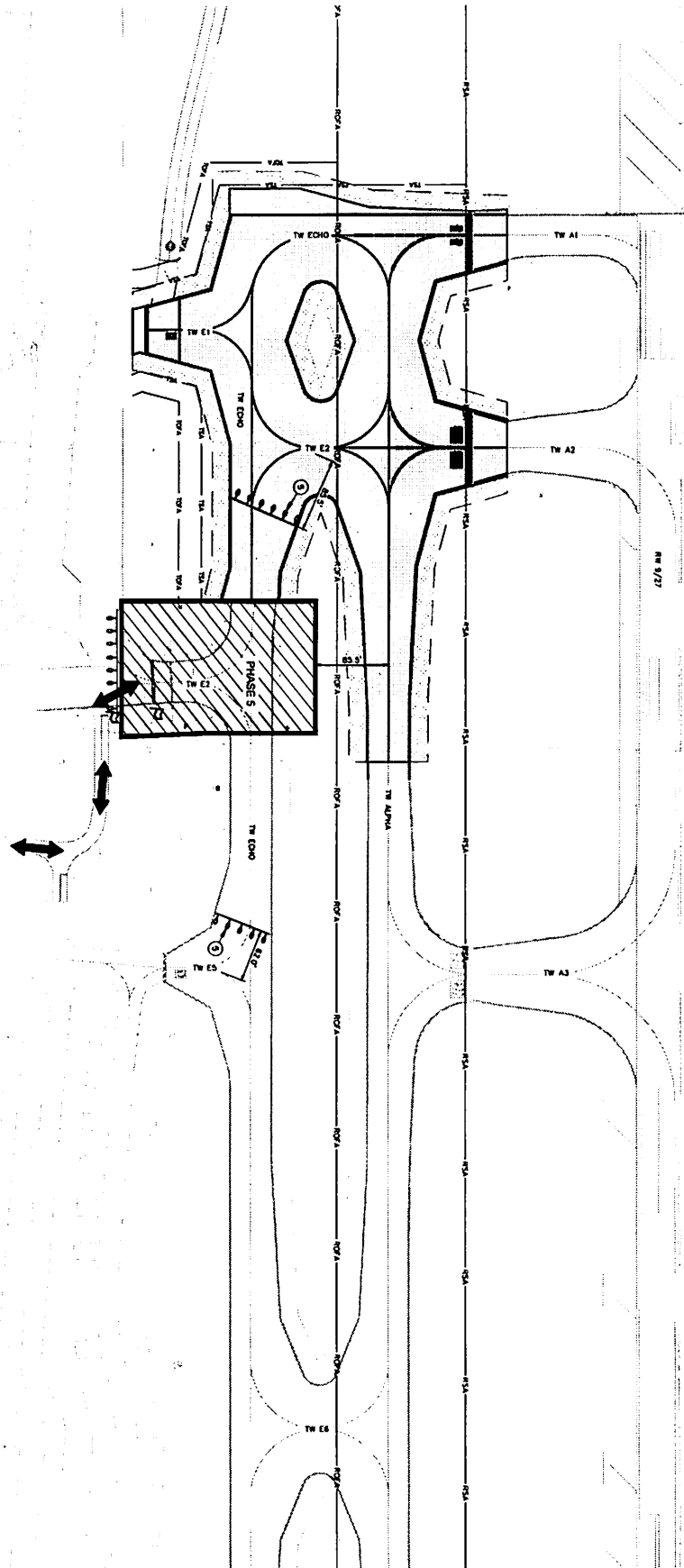
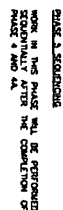
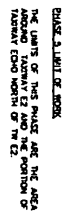
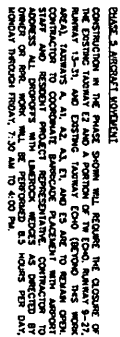
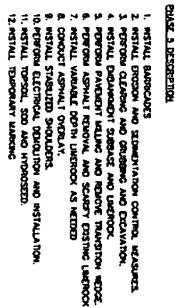
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| CHECKED BY: TFO | |
| FIELD BOOK: | |

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Professional Engineer
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THOMAS F.
ODONNELL



| <div><div>SHEET NO.</div><div>C09</div><div>TOTAL</div><div>74</div></div> | | <div>PROJECT # 12708</div> <div>RUNWAY 9 RUN-UP AREA AND</div> <div>TW INTERSECTION IMPROVEMENTS</div> <div>PHASING PLAN 4</div> | <div>REVISIONS</div> <table><thead><tr><th>NO.</th><th>DATE</th><th>BY</th><th>CHKD</th><th>DESCRIPTION</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table> | NO. | DATE | BY | CHKD | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | <div><div></div><div>CITY OF FORT LAUDERDALE</div><div>PUBLIC WORKS DEPARTMENT</div><div>ENGINEERING & ARCHITECTURE</div><div>100 North Andrews Avenue, Fort Lauderdale, Florida 33301</div></div> | <div><div>DRAFT BY</div><div>ALB</div><div>CHECKED BY</div><div>KAS</div><div>FIELD BOOK</div></div> <div><div>DATE</div><div>05/04/2022</div><div>SCALE</div><div>AS NOTED</div></div> | <div>State of Florida</div> <div>Professional Engineer</div> <div>License No. 62478</div> <div>THOMAS F. O'DONNELL</div> |
|--|------|--|--|-------------|------|----|------|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|
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**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
PHASING PLAN 5**

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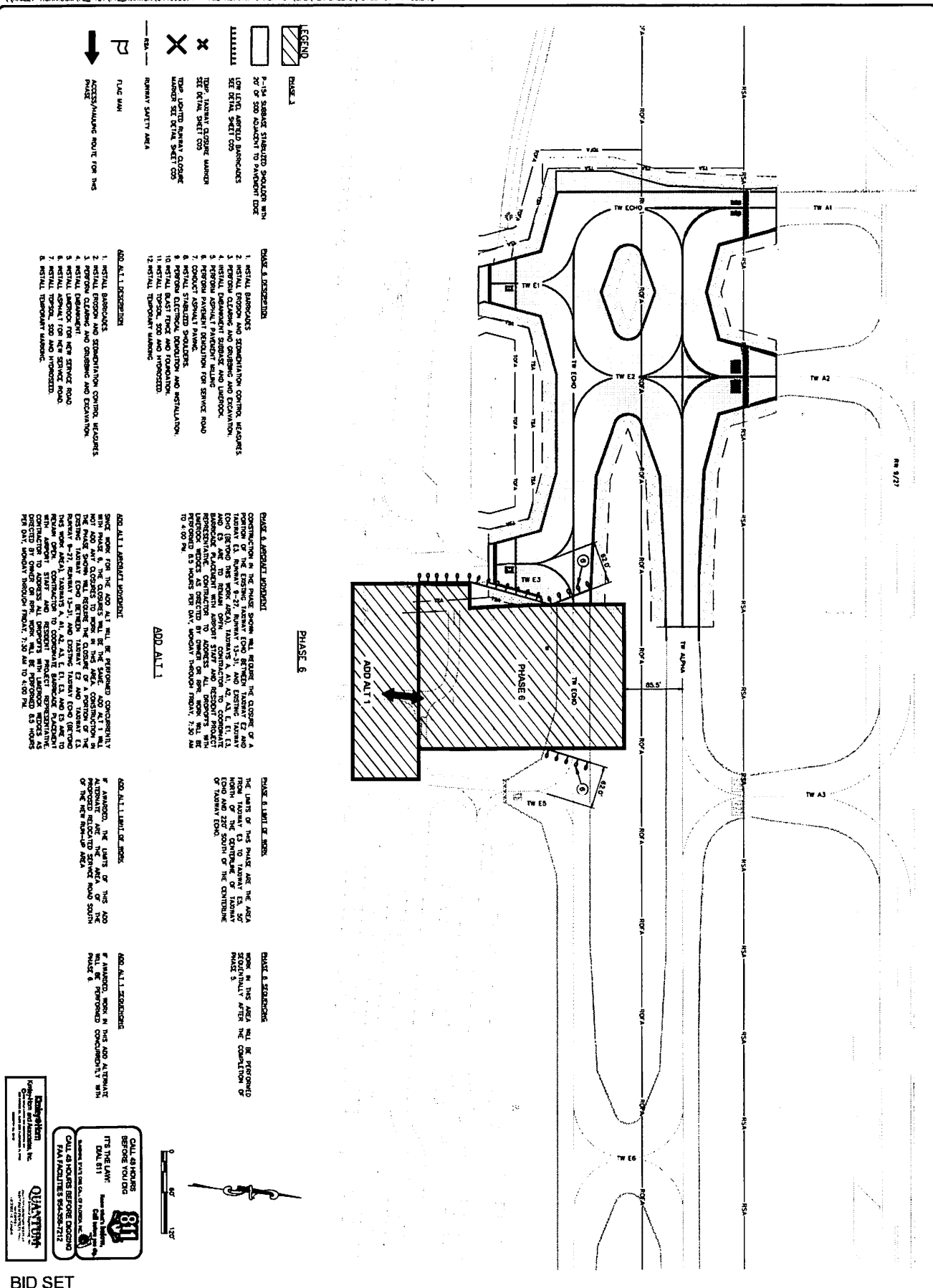
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| CHECKED BY: TFQ | |
| FIELD BOOK: | |

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License No. 62478

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ODONNELL

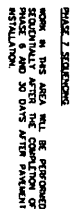
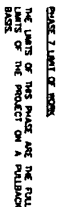
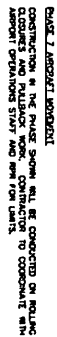
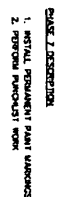
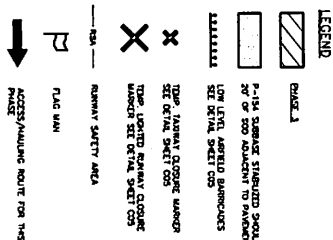


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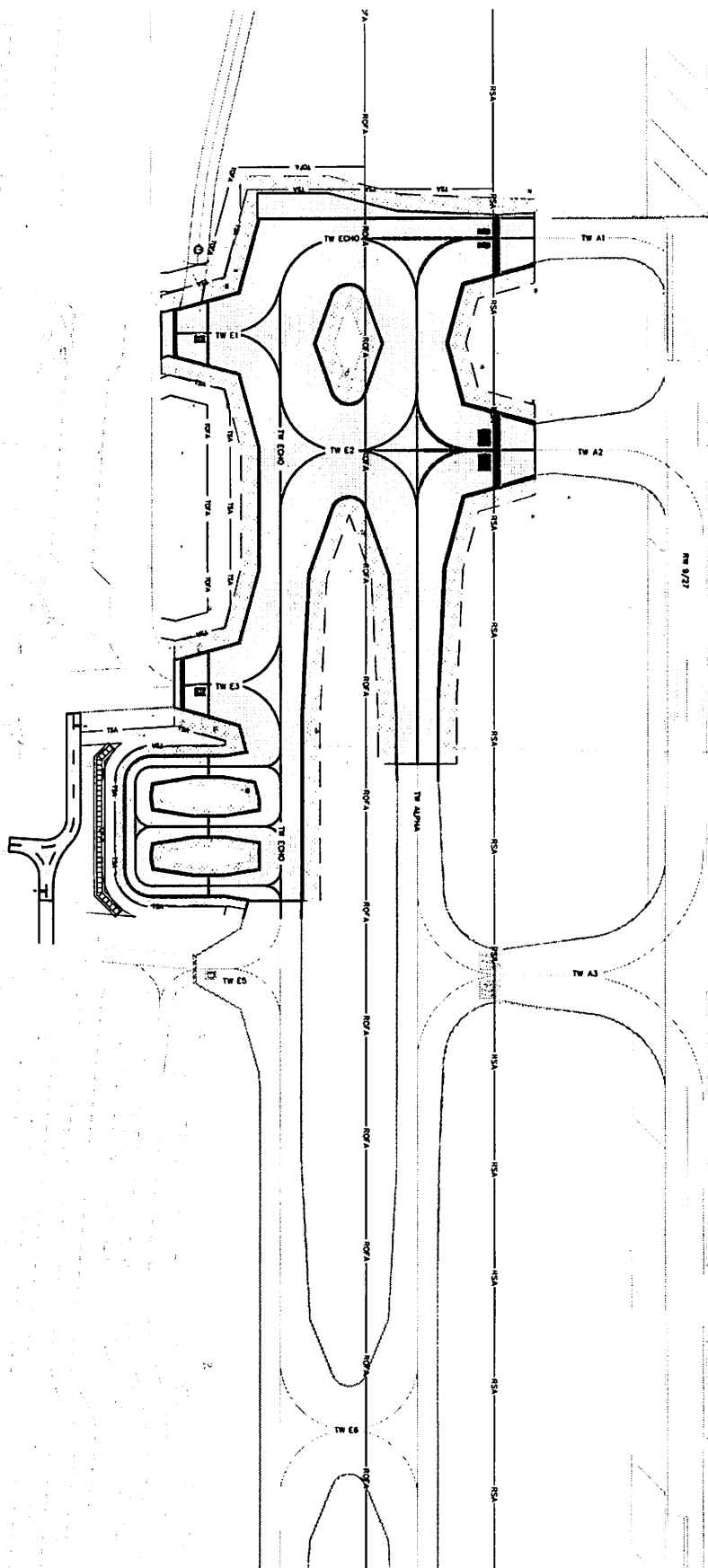
Figure 1

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| PROJECT # 12708 RUNWAY 9 RUN-UP AREA AND TW INTERSECTION IMPROVEMENTS PHASING PLAN 6 | SHEET NO. C11 TOTAL 74 | REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | NO | DATE | BY | CHKD | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | <div style="text-align: center;"> CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING & ARCHITECTURE </div> <div style="text-align: center; font-size: small;"> 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 </div> | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DRAWN BY ALB</td> <td style="width: 30%;">DATE 05/04/2022</td> </tr> <tr> <td>DESIGNED BY KAS</td> <td>SCALE AS NOTED</td> </tr> <tr> <td>CHECKED BY TFO</td> <td>FIELD BOOK</td> </tr> </table> <div style="text-align: right; font-size: small;"> State of Florida Professional Engineer License No. 62478 THOMAS F. O'DONNELL </div> | DRAWN BY ALB | DATE 05/04/2022 | DESIGNED BY KAS | SCALE AS NOTED | CHECKED BY TFO | FIELD BOOK |
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| DRAWN BY ALB | DATE 05/04/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESIGNED BY KAS | SCALE AS NOTED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHECKED BY TFO | FIELD BOOK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



PHASE 7



PM 8/27

City of New Brunswick

2008-02-11

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TOLL FREE 854-556-7212

BID SET

C12

**PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
TW INTERSECTION IMPROVEMENTS
PHASING PLAN 7**

[illegible]

 **CITY OF FORT LAUDERDALE**
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| | |
|---------------------|---------------------|
| DEATH BY: ALS | DATE: 05/04/2022 |
| DESIGNED BY: KAS | SCALE: AS NOTED |
| CHECKED BY: TFO | |
| FIELD BOOK | |

State of Florida
Professional Engineer
License No. 62478

THOMAS F.
ODONNELL



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

BID NO. 12679-623
FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP
AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS
(P12708)

ADDENDUM NO. 2

ISSUED: June 6, 2022

This Addendum is being issued to provide the following information. It is hereby made a part of the Plans and Specifications and shall be included with all contract documents.

Acknowledge receipt of this Addendum by inserting its number and date on the CITB Construction Bid Certification Page.

REPLACE: Technical Specifications 012900 – Payment Procedures

Delete Page 1 of the above technical specifications and replace with the attached. Part 1.2(D)(1) has been revised.

All other terms, conditions, and specifications remain unchanged.

Maureen Lewis, MBA, P2P08

Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

FXE RUNWAY 9 RUNUP & TAXIWAYS INT IMP

PROJECT 12708

**SECTION 012900
PAYMENT PROCEDURES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.
- C. BASIS OF PAYMENT - The price for each items shall include the furnishing of all labor, materials, equipment and incidentals required to complete the construction and to repair in a manner satisfactory to the Engineer any and all damage, as a result of work under this contract, done to existing structures, pavement, grass, utility pipe lines, conduits, drains, catch basins, and including all above and underground obstructions not specifically named here-in: replacing in a manner satisfactory to the Engineer and or all of the above items which may be damaged beyond repair as a result of work under this contract.
- D. Retainage: The City shall retain a portion of each partial payment according to the following schedule:
 - 1. The City will retain ~~ten percent (10%)~~ not less than five percent (5%) of all monies earned by Contractor until the work has been accepted by the City as Finally Complete.

1.3 APPLICATIONS FOR PAYMENT

- A. The General Contractor must meet with the City Representative on or about the 25th of each month. The City Representative will go over the pay items and agree on the quantities and the dollar amounts of the work completed during the month. A copy of the agreed amounts will be signed by the parties and a copy will be left with each representative.
- B. The General Contractor will make up a partial pay request using the City-supplied forms and submit the request to the City Representative before the first of the upcoming month.
- C. Each pay request must be accompanied by a partial release of lien by the General



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

BID NO. 12679-623
FORT LAUDERDALE EXECUTIVE AIRPORT RUNWAY NO. 9 RUN-UP
AREA RELOCATION AND SOUTH END TAXIWAY INTERSECTION
IMPROVEMENTS
(P12708)

ADDENDUM NO. 3

ISSUED: June 14, 2022

This Addendum is being issued to provide the following information. It is hereby made a part of the Plans and Specifications and shall be included with all contract documents.

Acknowledge receipt of this Addendum by inserting its number and date on the CITB Construction Bid Certification Page.

REVISED: Sheet S01 in the Plan Set has been revised to remove the note referencing an approved blast fence manufacturer.

All revisions are clouded and marked as Addendum 3.

All other terms, conditions, and specifications remain unchanged.

Maureen Lewis, MBA, P200
Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

100 North Andrews Avenue, Fort Lauderdale, Florida 33301
ENGINEERING & ARCHITECTURE
PUBLIC WORKS DEPARTMENT
CITY OF FORT LAUDERDALE

PROJECT # 12708
RUNWAY 9 RUN-UP AREA AND
BLAST FENCE
INTERSECTION IMPROVEMENTS

STATE OF FLORIDA
Professional Engineer
License No. 62478
THOMAS F. O'DONNELL

DATE: 05/04/2022
BY: [Signature]
CHECKED BY: [Signature]
SCALE: AS NOTED

REVISIONS
NO. DATE BY/CHKD BY/APPD
1 5/9/2022 KAS JTD
2 5/9/2022 KAS JTD

BID SET
SHEET NO. S01 OF 70
TOTAL SHEETS: 70
DRAWING FILE NO. 4-143-40

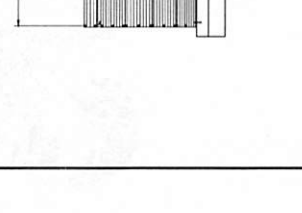
BLAST DEFLECTOR NOTES:

1. BLAST DEFLECTOR SHALL WITHSTAND TAKE/REARMAWY EXHAUST VELOCITIES OF 150 PSF (NOVA), 170 PSF (NOVA), 144.2 PSF (ULI) = 86.5 PSF (NOVA), 50 PSF (NOVA).
2. NO AIRBORNE SHARD PENETRATION SHALL BE ALLOWED TO THE LEADING EDGE OF THE BLAST DEFLECTOR.
3. HIGH-IMPACT DEFLECTOR HAS A NOMINAL HEIGHT OF 8' WITH A GREATER EFFECTIVE HEIGHT OF 10'.
4. FRAME MEMBERS SHALL BE ASTM A36 STEEL AND NOT-IMP GALVANIZED TO 2.
5. DEFLECTING SURFACES SHALL BE CORRUGATED STEEL SHEETS DESIGNED TO WITHSTAND IMPACT LOADS OF 100,000 LBS PER LINEAL FOOT (100 KIP/FT) WITH A MINIMUM OF 10' SPACING BETWEEN SURFACES.
6. ALL DEFLECTOR SURFACES SHALL BE A MINIMUM OF 0.1875" THICK (1/4") ALUMINUM OR 0.1875" THICK (1/4") GALVANIZED STEEL PER ASTM A653.
7. ALL DEFLECTOR SURFACES SHALL BE GALVANIZED TO 2.
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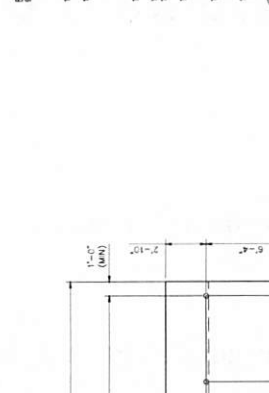
FOUNDATION NOTES:

1. FOUNDATION SHALL BE CONCRETE ON THE FOLLOWING ASSUMPTIONS:
 - a. ALLOWABLE SOIL BEARING CAPACITY: 2500 PSF
 - b. ALLOWABLE SOIL SETTLEMENT: 1.0" (100 KIP/FT)
 - c. ALLOWABLE SOIL COMPRESSION: 0.05"
 - d. ALLOWABLE SOIL TENSION: 0.05"
2. GENERAL CONTRACTOR SHALL VERIFY CORRECT LOCATION AND ELEVATION OF THE FINISHED SURFACE SHALL BE A SINGLE PLANE AND MAY SLOPE UP TO 1% IN ANY DIRECTION.
3. FINISHED FOUNDATION ELEVATION: 41.74'
4. PORTLAND CEMENT CONCRETE SHALL MEET P-810 AND DEVELOP A MINIMUM OF 40% TENSILE STRENGTH.
5. JOINT SEALANT SHALL BE INSTALLED IN ACCORDANCE WITH P-602 AND P-603.
6. REINFORCING STEEL OR ANY OTHER UNLOADED COMPONENTS, SHALL NOT BE PLACED WITHIN THE TOP 5' OF THE FINISHED FOUNDATION SURFACE FOR ANCHOR.
7. CONSTRUCTION AND CONSTRUCTION JOINTS SHALL BE PLACED 12" O.C. (MAX.) OR LESS.
8. BLAST DEFLECTOR MANUFACTURER SHALL DESIGN, FURNISH, LOCATE, AND INSTALL THE DEFLECTOR AND ANCHORAGE AFTER FOUNDATION CONSTRUCTION HAS BEEN COMPLETED.

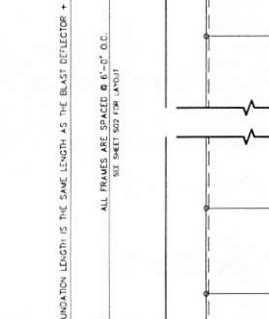
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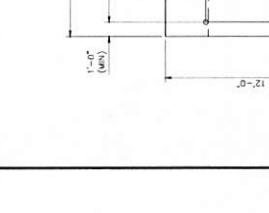
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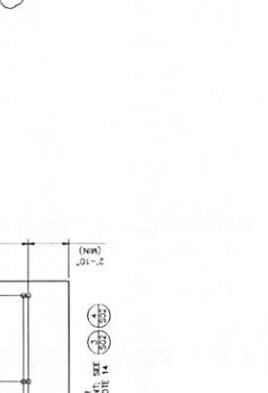
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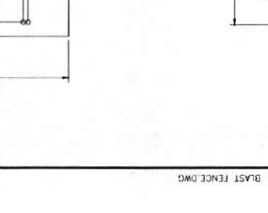
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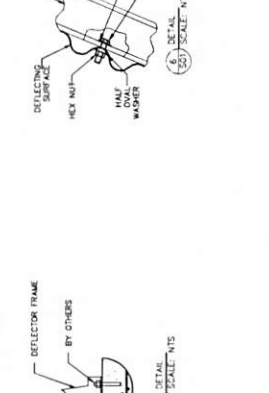
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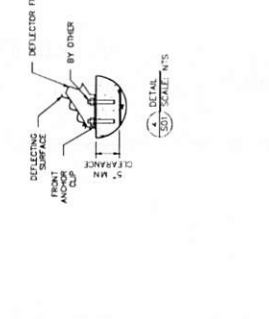
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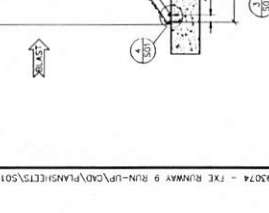
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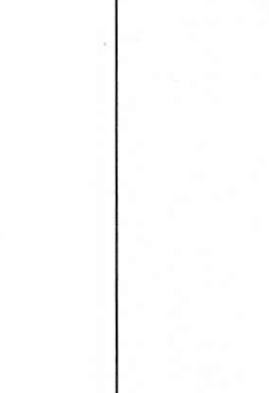
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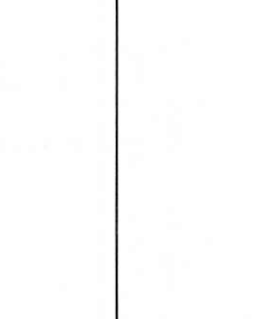
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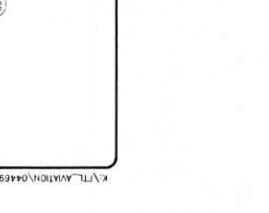
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Question and Answers for Bid #12679-623 - FXE Runway 9 Run-up Area Relocation & SouthEnd Taxiway Intersection Improvements

Overall Bid Questions

Question 1

What is the budget and/or engineer's estimate for this project? (Submitted: May 11, 2022 8:17:19 AM EDT)

Answer

- Cost estimate is approximately \$3.5 million. (Answered: May 11, 2022 4:48:21 PM EDT)

Question 2

Please clarify scope of work for Phase 7-Add Alternate shown on drawing C-13. (Submitted: May 19, 2022 4:39:15 PM EDT)

Answer

- The scope of work for the Add alternate is to install new service road on the south side of the project. Please refer to the construction plans and CSV (bid line items) for details. The Add alternate scope of work is shown on the plans. (Answered: May 23, 2022 10:29:18 AM EDT)

Question 3

There is electrical work on taxiway A1 beyond the limits of phase 2A. Please advise under which phase this work will be completed. (Submitted: May 19, 2022 4:40:34 PM EDT)

Answer

- The electrical work on Taxiway A1 beyond the limits phase 2A will be performed within phase 2A. (Answered: May 31, 2022 2:06:11 PM EDT)

Question 4

There is electrical work on taxiway A2 beyond the limits of phase 4A. Please advise under which phase this work will be completed. (Submitted: May 19, 2022 4:40:55 PM EDT)

Answer

- The electrical work on TW A2 North of the RSA will be performed in Phase 4A alongside the adjacent electrical work in Phase 4A. (Answered: May 31, 2022 1:48:59 PM EDT)

Question 5

There is electrical work on taxiway E, east of taxiway E5 beyond the limits of phase 6. Please advise under which phase this work will be completed. (Submitted: May 19, 2022 4:41:39 PM EDT)

Answer

- The electrical work on TW Echo East of TW E5 will be performed in Phase 6 alongside the adjacent electrical work in Phase 6. (Answered: May 31, 2022 1:48:59 PM EDT)

Question 6

Good morning Maureen,

Ryan Inc would like to submit these questions.

55.078 Public construction retainage.—

- (1) With regard to any contract for construction services, a public entity may withhold from each progress payment made to the contractor an amount not exceeding 10 percent of the payment as retainage until 50-percent completion of such services.
- (2) After 50-percent completion of the construction services purchased pursuant to the contract, the public entity must reduce to 5 percent the amount of retainage withheld from each subsequent progress payment made to the contractor. For purposes of this section, the term "50-percent completion" has the meaning set forth in the contract between the public entity and the contractor or, if not defined in the contract, the point at which the public entity has expended 50 percent of the total cost of the construction services purchased as identified in the contract together with all costs associated with existing change orders and other additions or modifications to the construction services provided for in the contract.
- (3) Please confirm that this contract complies with Florida State Statute 55.078 regarding the withholding of retainage on public contracts in the amount of 10% until 50% of the contract is completed and not 10% until after final completion of the project as suggested by section 90-06 of the specifications? (Submitted: May 20, 2022 10:42:56 AM EDT)

Answer

- Retainage starts at 5% and is not released until the project is completed. See Addendum 2. (Answered: Jun 6, 2022 12:15:02 PM EDT)

Question 7

Please clarify the retainage percentage on this project. The sample contract states that the retainage will be 5%. However, the General Requirements and section 90-06 call for retainage to be 10%. (Submitted: May 25, 2022 6:17:05 PM EDT)

Answer

- Retainage starts at 5% and is not released until the project is completed. (Answered: Jun 6, 2022 12:15:02 PM EDT)

Question 8

Given the fluctuations in commodity prices, please clarify if material price escalation will be allowed on this project. (Submitted: May 31, 2022 11:08:03 AM EDT)

Answer

- This is a one-time contract. Therefore, material price adjustment(s) will not be allowed under the contract. (Answered: May 31, 2022 2:06:11 PM EDT)

Question 9

Phases 2A & 4A will be completed at night. The work schedule for the city inspectors is from 8:00 AM to 4:30 PM. Please clarify if the city inspections during these phases will be considered overtime for the city inspector given that it is outside of the inspector's working hours. (Submitted: May 31, 2022 11:11:52 AM EDT)

Answer

- The construction will be inspected by a full time Resident Project Representative so a City inspector is not needed.
- The City inspection is only needed when operating on Cityâ€™s facilities or underground utilities under unforeseen

conditions. (Answered: May 31, 2022 2:11:57 PM EDT)

Question 10

Please provide depth of 1w2" conduit that will be hand dug and concrete encased. Also, clarify if concrete encasement will be poured flush with finished grade. (Submitted: May 31, 2022 2:13:49 PM EDT)

Answer

- The 1W2â conduit is a minimum of 24â below grade. Provide a 3â concrete encasement around 1W2â conduit as per demolition note 9 on sheet E02. (Answered: Jun 2, 2022 10:07:49 AM EDT)

Question 11

Please provide depth of 2w4" conduit that will be hand dug and concrete encased. Also, clarify if concrete encasement will be poured flush with finished grade. (Submitted: May 31, 2022 2:15:08 PM EDT)

Answer

- The 2W4â ductbank is a minimum of 24â below grade. Provide a 3â concrete encasement around 2W4â ductbank as per demolition note 10 on sheet E02. (Answered: Jun 2, 2022 10:07:49 AM EDT)

Question 12

Please confirm that the 7.7% DBE goal is not mandatory. (Submitted: Jun 1, 2022 2:31:27 PM EDT)

Answer

- The 7.7% DBE goal is not mandatory. (Answered: Jun 6, 2022 12:15:02 PM EDT)

Question 13

Will the MOT devices placed as shown on the phasing plans for phases 2-6 to close the area remain in place at the end of each work shift or will they be picked up at the end of each work shift? (Submitted: Jun 2, 2022 1:56:05 PM EDT)

Answer

- MOT devices will need to remain in place after every work shift until the end of each phase of the project. Contractor will need to keep the working area closed during the entire length of the phase. (Answered: Jun 3, 2022 3:34:40 PM EDT)

Question 14

Will the contractor be required to cover the cost of all permits?
Besides and NPDES permit, what permits are expected to be required for this project? (Submitted: Jun 2, 2022 2:53:45 PM EDT)

Answer

- Yes, contractor will need to cover the cost of permits. No other permits are anticipated for this project. (Answered: Jun 3, 2022 3:34:40 PM EDT)

Question 15

Will airport badging be required to work within the airport (airside)?
If so what is the cost per employee badge? (Submitted: Jun 2, 2022 4:20:24 PM EDT)

Answer

- The badging will be required for this project. There will be no cost to the contractor for badging. (Answered: Jun 3, 2022 3:34:40 PM EDT)

Question 16

In the Instructions to Bidders, the Insurance section states that the "Contractor shall provide and shall require all of its sub-contractors to provide, pay for, and maintain in force at all times during the term of the Agreement, such insurance, including Property Insurance (Builder's Risk), Commercial General Liability.....". Section 10 of the Special Conditions states: "the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below." Section 10 does not reference Property Insurance (Builder's Risk). Is Builder's Risk Insurance required for this project? (Submitted: Jun 10, 2022 3:45:40 PM EDT)

Answer

- The insurance requirement for this bid is outlined in Section 10 of the Special Conditions section as well as in Article 10.3 of the Sample Agreement.

According to the above, Builder's Risk is not required. (Answered: Jun 13, 2022 10:09:14 AM EDT)

Question 17

Specification 101-1 States: "all material removed from the work areas are property of the airport. The contractor is to coordinate with the airport where to stockpile the removed materials on site or in an off site location as requested by the owner." Where is the material removed from the project to be stockpiled, and will this be an off site location? (Submitted: Jun 10, 2022 4:04:35 PM EDT)

Answer

- Excavated material will need to be stockpiled within the airport's properties. It will be offsite but within the airport. (Answered: Jun 15, 2022 4:55:35 PM EDT)

Jun 42

| ROUTING (5/10/2023) | | |
|---------------------|-----------------------------------|----------------|
| | | |
| 1) | Shannon/KymH | SMB 5/12/2023 |
| 2) | Omar (PW) or designee | OC 5/26/23 |
| 3) | Glenn (Proc.) or designee | SM 6/6/23 |
| 4) | Peter (FIN) or designee | JP 6/8/23 |
| 5) | Linda (FIN) or designee | MB 6/8/23 |
| 6) | City Attorney (Shari) or designee | SW 6/21/23 |
| 7) | CMO & City Clerk | TD CCO 6/26/23 |
| 8) | Maureen Lewis | |

12

SURETY BOND REQUIRED? X Yes No

ITEM: ☒ M-4

ATTACHED: ☐ Copy of CAR ☒ ACM Form ☒ 2 originals

Please Check the proper box: CIP FUNDED ☒ YES ☐ NO Signature *Shannon Barrett* Date: 5/12/2023

Shari C. Wallen
6/21/23