CITY OF FORT LAUDERDALE
CONTRACT AND SPECIFICATIONS PACKAGE

BID/EVENT NO 479

PROJECT NO. 12598

Riverland Road Traffic Calming Improvements

Inessa Rubin
Senior Procurement Specialist
Telephone: (954) 828-6099 E-mail: irubin@fortlauderdale.gov

TABLE OF CONTENTS

Description **Pages**

I. BID INFORMATION

Invitation to Bid 1
Instruction to Bidders 4
General Conditions 11
Special Conditions 21

II. CONSTRUCTION AGREEMENT (SAMPLE).....C-39

III. TECHNICAL SPECIFICATIONS (INCLUDED)

IV. PLANS AND DRAWINGS (INCLUDED)

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.

Construction Bid Certification
Questionnaire Sheet
References
Non-Collusion Statement
Non-Discrimination Certification Form
Local Business Preference Certification
Disadvantaged Business Enterprise Preference Certification
Contract Payment Method
Trench Safety
E-Verify Affirmation Statement
Affidavit of Compliance with Foreign Entity Laws

INVITATION TO BID

Sealed bids will be received electronically until **2:00 p.m.**, local time, on **July 15, 2025,** and opened online immediately thereafter for **BID/EVENT NO., 479, PROJECT NO.12598, Riverland Road Traffic Calming.**

Please be advised that effective immediately, and until further notice, all Invitation to Bids, Request for Proposals, Request for Qualifications, and other solicitations led by the City of Fort Lauderdale will be opened electronically via the City's on-line strategic sourcing platform at the date and time indicated on the solicitation. All openings will be held on the City's on-line strategic sourcing platform.

In the event of any conflict or discrepancy between bid price(s) submitted by bidder electronically into the City's online strategic sourcing platform Unit Price field(s), any other forms or attachments (whether part of the City's solicitation documents or documents created and uploaded by the bidder, or another section/field of the System, the online unit price(s) **inputted** electronically into the System by the bidder shall govern.

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

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified bidders, hereinafter referred to as the Contractor, to provide Construction services for the City's Transportation and Mobility Department, in accordance with the terms, conditions, and specifications contained in this Invitation To Bid (ITB).

This project is located along Riverland Road at the intersections of Tortugas Lane, Gulfstream Lane, Riverland Terrace, and Waterside Drive in the City of Fort Lauderdale. The scope of work under this contract includes, but is not limited to, the construction of raised asphalt crosswalks, modification of existing sidewalks, installation of signage, pavement markings, patterned pavements, driveway adjustments, and drainage improvements.

THE FOLLOWING IS APPLICABLE TO THIS SOLICITATION IF CHECKED:

☐ **LUMP SUM BID** - City shall pay awarded bidder the Contract Price for the performance of work described in this Invitation for Bid. Payment shall be at the lump sum price stated in this Invitation to Bid and/or resultant contract. This price shall be full compensation for all costs, including overhead and profit, associated with completion of all work in full conformity with the requirements as stated or shown, or both, in the contract documents. The cost of any item of work not covered in this solicitation shall still be provided and the cost borne by the contractor. NO CHANGE ORDERS WILL BE ALLOWED UNLESS IT IS OWNER-DRIVEN AND INITIATED BY THE CITY.

Drawing Plans: This Project consists of Drawing file with 38 sheets. Drawing plans may be obtained **free of charge** at the City's online strategic sourcing platform.

Licensing Requirements: Possession of
a State of Florida Certified General Contractor
OR
Any other State or County License(s), Certification(s) or Registration(s) deemed legally permissible by the City to conduct the nature of the work required in this solicitation.

Any sub-contractors employed by the Proposer shall be licensed and insured in accordance with this solicitation. Additionally, it is the Proposer's responsibility for ensuring that any sub-contractors' work meets the requirements of this solicitation at all times.

NOTE: Payment on this contract will be made by Visa or MasterCard

Pre-Bid Conference: A virtual pre-bid conference is scheduled for Tuesday, June 19, 2025 at 10:00 am local time.

Join the meeting now
Meeting ID: 211 801 620 555 5
Passcode: Hv2L7E5C

Dial in by phone
+1 954-686-7296,,619400268# United States, Fort Lauderdale
Find a local number
Phone conference ID: 619 400 268#
Join on a video conferencing device
Tenant key: fortlauderdale1@m.webex.com
Video ID: 113 004 964 9

While attendance is not mandatory, the opportunity to speak with the Transportation and Mobility team may not be available otherwise. It is the sole responsibility of the Contractor to become familiar with the scope of the City's requirements and systems prior to submitting a bid. No variation in price or conditions shall be permitted based upon a claim of ignorance. It is strongly suggested that all Bidders attend the pre-bid meeting and/or site visit.

It will be the sole responsibility of the Bidder to attend the pre-bid/site visit to inspect the City's location(s) facilities systems prior to submitting a bid. 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 themselves with the nature and extent of the work, equipment, materials, and labor required.

If a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

Bid Bonds:

Bidders can submit bid bonds **three** different ways.

1) Bidders may **upload** their original executed bid bond on the City's online strategic sourcing platform to accompany their electronic bids and deliver the original, signed and sealed hard copy to the Finance Department, Procurement Services Division, 101 NE 3rd Avenue, Suite 1650, Fort Lauderdale, Florida 33301-1016, **within five (5) business days** after bid opening, with the company name, bid number and title clearly indicated on the envelope.

2) Bidders can **hand deliver** their original, signed and sealed bid bond in a sealed envelope to the Finance Department, Procurement Services Division, 101 NE

3rd Avenue, Suite 1650, Fort Lauderdale, Florida 33301-1016, **before time of bid opening**, with the company name, bid number and title clearly indicated on the envelope.

3) Bidders can **mail** their original, signed and sealed bid bond to the Finance Department, Procurement Services Division, 101 NE 3rd Avenue, Suite 1650, 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 its 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 THE CITY'S ONLINE STRATEGIC SOURCING PLATFORM.**

Certified Checks, Cashier's Checks and Bank Drafts:
These **CANNOT** be submitted via the City's online strategic souring platform, 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, 101 NE 3rd Avenue, Suite 1650, 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 its bid bond or other bid security is received by the Procurement Services Division before the 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 on the City's online strategic sourcing platform. 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. **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.

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.

-END OF SECTION-

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 bid 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 or City staff shall relieve the Contractor from any risk or from fulfilling all terms of the contract.

INCONSISTENCIES – Any inconsistency between different provisions of the plans, specifications, bid 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 bids. After bids are opened, the bidders shall abide by the decision of the Engineer as to such interpretation.

ADDENDA AND INTERPRETATIONS - No interpretation 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 the City's online strategic sourcing platform. 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 the City's online strategic sourcing platform.** Failure of any bidder to receive any such addenda or interpretation shall not relieve any bidder from any obligation under its bid as submitted. All addenda so issued shall become a part of the contract document. **Bidder** shall verify in the City's online strategic sourcing platform that it 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.

FORMS OF BIDS - Each bid and its accompanying statements 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. In the event of any conflict or discrepancy between bid

price(s) submitted by bidder electronically into the City's online strategic sourcing platform Unit Price field(s), any other forms or attachments (whether part of the City's solicitation documents or documents created and uploaded by the bidder, or another section/field of the System, the online unit price(s) **inputted** electronically into the System by the bidder shall govern.

The bid 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 bid. No bid 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 bid pages, and bids must fully cover all items for which prices 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 bid. In the event of any conflict or discrepancy between bid price(s) submitted by bidder electronically into the City's online strategic sourcing platform Unit Price field(s), any other forms or attachments (whether part of the City's solicitation documents or documents created and uploaded by the bidder, or another section/field of the System, the online unit price(s) **inputted** electronically into the System by the bidder shall govern.

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.

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 cost to the City for approval prior to proceeding with the work.

TERMINATION 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 bid will be canvassed, considered or accepted which, in the opinion of the City 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 bid 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 bids will be rejected, if there is reason to believe that collusion exists among bidders. A bid 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 bids and to waive such technical errors as may be deemed best for the interests of the City.

BID PROTEST PROCEDURE: Any 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

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_ARTVFI_DIV2PR_S2-182DIREPRAWINAW

WITHDRAWALS - Any bidder may, without prejudice to himself, withdraw its bid at any time prior to the expiration of the time during which bids 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 bid. After expiration of the period for receiving bids, no bids 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 responsive and responsible, 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** from the City's on-line strategic sourcing platform.

T

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 (2024), 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 (2024), 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.

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 (2024).

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 Bid 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:

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 bid 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_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 Bid 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

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 bid 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 at 1 East Broward Boulevard, Suite 444, Fort Lauderdale, Florida 33301.

The Ordinance may also be viewed on the City's website at https://www.fortlauderdale.gov/home/showdocument?id=6036.

-END OF SECTION-

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 bid 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 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.

"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

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.

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.
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 City 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 aide 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.

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 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 Iran Terrorism Sectors List, created pursuant to Section 215.473, Florida Statutes (2024), as may be amended or revised, and that it does not have business operations in Cuba or Syria, as provided in Section 287.135, Florida Statutes (2024), 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 (2024), 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 (2024), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List, or been placed on a list created pursuant to Section 215.473, Florida Statutes (2024), as may be amended or revised, relating to scrutinized active business operations in Iran , or been placed on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2024), 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 (2024), as may be amended or revised.

By submitting a bid 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 Bidder's response to the Solicitation purporting to require confidentiality of any portion of the Bidder'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 Bidder submits any documents or other information to the City which the Bidder claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Bidder shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Bidder 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 Bidder's response to the Solicitation constitutes a Trade Secret. The City's determination of whether an exemption applies shall be final, and the bidder 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 bidder 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. Bids purporting to be subject to copyright protection in full or in part will be rejected. The bidder 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.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES (2022), 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**
1 East Broward Boulevard, Suite 444
Fort Lauderdale, FL 33301

E-mail: **prrcontract@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 (2024), 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.

GC – 35 - ANTI-HUMAN TRAFFICKING, KIDNAPPING, CUSTODY AND RELATED OFFENSES - Bidder, proposer, quoter, or any other respondent to any City solicitation/notice or serving as a City consultant, contractor, vendor or otherwise entering into any contract (including, without limitation, contract renewal, extension, amendment as applicable) with the City affirms and stipulates that it is not in violation of Section 787.06(13) of the 2024 Florida Statutes entitled "Kidnapping; Custody Offenses; Human Trafficking and Related Offenses." The entity (which includes any business entity however formed/ incorporated) intending to provide goods or services by submitting a response to a city solicitation further affirms to the City as a governmental entity defined in Section 287.138(1) of the 2024 Florida Statutes that it does not use coercion for labor or services as defined in Section 787.06 of the 2024 Florida Statutes.

-END OF SECTION-

SPECIAL CONDITIONS

01. PURPOSE

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor, Bidder, or Proposer, to provide Construction Services for the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).

02. TRANSACTION FEES

The City uses the City's on-line strategic sourcing platform INFOR, 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 the City's on-line strategic sourcing platform, and that any bid security reaches the City of Fort Lauderdale, Procurement Services Division, 101 North East 3rd Avenue, Suite 1650, 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 SUBMITTALS WILL NOT BE ACCEPTED. PLEASE SUBMIT YOUR BID RESPONSE ELECTRONICALLY.** In the event of any conflict or discrepancy between bid price(s) submitted by bidder electronically into the City's online strategic sourcing platform Unit Price field(s), any other forms or attachments (whether part of the City's solicitation documents or documents created and uploaded by the bidder, or another section/field of the System, the online unit price(s) **inputted** electronically into the System by the bidder shall govern.

04. INFORMATION OR CLARIFICATION

For information concerning procedures for responding to this solicitation, contact Senior Procurement Specialist Inessa Rubin at (954) 828-6099 or email at irubin@fortlauderdale.gov. Such contact shall be for clarification purposes only.

For information concerning technical specifications, please utilize the question / answer feature provided by the City's on-line strategic sourcing platform. 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. Contractors please note: Bids shall be submitted as stated in PART IV – Submittal Requirements. No part of your proposal 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 Contractor has familiarized themselves 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 the City's on-line strategic sourcing platform 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 **14 calendar days** of the date of the Notice to Proceed.

5.2 The Work shall be Substantially Completed within **120 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 **150 calendar days** after 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:

a State of Florida Certified General Contractor

OR

Any other State or County License(s), Certification(s) or Registration(s) deemed legally permissible by the City to conduct the nature of the work required in this solicitation.

Any sub-contractors employed by the Proposer shall be licensed and insured in accordance with this solicitation. Additionally, it is the Proposer's responsibility for ensuring that any sub-contractors' work meets the requirements of this solicitation at all times.

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 at least five (5) years previous construction experience in roadway construction including landscape, sidewalks, drainage and other related activities in the State of Florida. Bidder shall submit proof of experience for 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: REFERENCES SHALL NOT INCLUDE 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.

Contingencies	Amount
Other: Contingency	$65,000
TOTAL:	**$65,000**

10. INSURANCE REQUIREMENTS *(See Article 10, Bonds and Insurance, of the Contract for details)*

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, Contractor shall, at its sole expense, 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 Contractor. Contractor shall provide the City a certificate of insurance evidencing such coverage. Contractor's insurance coverage shall be primary insurance for all applicable policies, in respect to the City's interests for this Agreement. The limits of coverage under each policy maintained by Contractor shall not be interpreted as limiting 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 Contractor for assessing the extent or determining appropriate types and limits of coverage to protect 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 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 municipality, its officials, employees, and volunteers are to be included 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 Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

Pollution and Remediation Legal Liability (Hazardous Materials)
For the purpose of this section, the term "hazardous materials" includes all materials and substances that are designated or defined as hazardous by Florida or federal law or by the rules

or regulations of Florida or any federal agency. If work being performed involves hazardous materials, Contractor shall procure and maintain any or all of the following coverages (which will be specifically addressed upon review of exposure):

Contractors Pollution Liability Coverage
For sudden and gradual occurrences and in an amount not less than $1,000,000 per claim arising out of this Agreement, including but not limited to, all hazardous materials identified under the 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 Contractor does not own vehicles, 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.

Contractor waives, and Contractor shall ensure that 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.

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

Insurance Certificate Requirements

a. 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. 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 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 Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, 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 included as an Additional Insured on all liability policies, with the exception of Workers' Compensation.

g. The City shall be granted a Waiver of Subrogation on Contractor's Workers' Compensation insurance policy.

h. The title of the Agreement, Bid/Contract number, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:
City of Fort Lauderdale
c/o Procurement Services Division
401 SE 21st Street
Fort Lauderdale, FL 33316

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 application of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for including the City as an Additional Insured shall be at Contractor's expense.

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

Contractor's insurance coverage shall be primary insurance in respect to the City's interests for this Agreement, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City shall be non-contributory.

Any exclusion or provision in any insurance policy maintained by 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 Agreement work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage may be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate of insurance 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.

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

It is Contractor's responsibility to ensure that any and all of 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 Contractor. The City reserves the right to adjust insurance limits from time to time at its discretion with notice to 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 bid 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 Danica Grujicic whose address is 290 NE 3rd Avenue, Fort Lauderdale, FL 33301, telephone number: (954) 828-5734, and e-mail address is dgrujicic@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 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 sample Agreement, Article 16, Liquidated Damages)

14. PAYMENT (*See Article 7, Payment, of the Contract for other details*)

The City shall make payment to the Contractor through utilization of the City's P-Card Program. The City has implemented a Purchasing Card (P-Card) Program utilizing both the VISA and MASTERCARD networks. Purchases from this contract will be made utilizing the City's Purchasing Card. Contractor will receive payment from the purchasing card in the same manner as other credit card purchases. Accordingly, Contractor must presently have the ability to accept these credit cards or take whatever steps necessary to implement the ability before the start of the contract term, or contract award by the City. All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

PCI (Payment Card Industry) Compliance

Contractor agrees to comply with all applicable state, federal and international laws, as well as industry best practices, governing the collection, access, use, disclosure, safeguarding and destruction of Protected Information.

Contractor and/or any subcontractor that handles credit card data must be, and remain, PCI compliant under the current standards and will provide documentation confirming compliance upon request by the City of Fort Lauderdale, failure to produce documentation could result in termination of the contract.

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.

-END OF SECTION-

CITY OF FORT LAUDERDALE
CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT ("Agreement") made and entered into this _____ day of _____, 2025, 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. 479, Project Number 12598, which was opened on _____; and

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

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.

SAMPLE CONSTRUCTION AGREEMENT

1.7 Change Order - A written document executed by both Parties 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, and volunteers, 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, 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 Agreement.

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.

SAMPLE CONSTRUCTION AGREEMENT

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-workdays 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 condition’s 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

SAMPLE CONSTRUCTION AGREEMENT

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 written notice is provided by the City to the Contractor stating that the Work is substantially completed. If, at the time of inspection, it is determined the project is substantially completed, the City will also 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:

RIVERLAND ROAD TRAFFIC CALMING
ITB 479 PROJECT 12598

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 Riverland Road at the intersections of Tortugas Lane, Gulfstream Lane, Riverland Terrace and Waterside Drive, in the City of Fort Lauderdale. The work to be accomplished under this contract includes, but is not limited to, Raised crosswalks, adjustment of existing sidewalks, raised asphalt crosswalk, signage, pavement markings patterned pavements, driveway adjustments and drainage improvements.

SAMPLE CONSTRUCTION AGREEMENT

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 Danica Grujicic, whose address is 290 NE 3rd Avenue, Fort Lauderdale, FL 3330, telephone number: (954) 828-5734, and email address is dgrujicic@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, include this Agreement and the following documents listed below which comprise the entire Agreement between the City and Contractor, and these documents listed below are hereby incorporated herein, even if they are not attached to this Agreement. The Contract Documents 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. 479, Instructions to Bidders, and Bid Bond.

4.12 Contractor's response to the City's Invitation to Bid No. 479, dated _____.

4.13 Schedule of Completion.

SAMPLE CONSTRUCTION AGREEMENT

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.

4.17 Foreign Entity Affidavit.

4.18 Anti-Human Trafficking Affidavit.

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. 479, and the specifications prepared by the City.

g. Contractor's response to the City's Invitation to Bid No. 479, 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.

SAMPLE CONSTRUCTION AGREEMENT

ARTICLE 5 – CONTRACT TIME

5.1 The Contractor recognizes that **TIME IS OF THE ESSENCE**. The Work shall commence within **14 calendar days** of the date of the Notice to Proceed.

5.2 The Work shall be Substantially Completed within **120 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 **150 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

SAMPLE CONSTRUCTION AGREEMENT

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 (2024), as amended or revised, provided, however, complete and error free pay application is submitted.

7.7 The City shall make payment to the Contractor through utilization of the City's Purchasing Card (P-Card) Program. The City has implemented a P-Card Program utilizing the MASTERCARD and VISA networks. Purchases from this contract will be made utilizing the City's P-Card. Contractor will receive payment from the purchasing card in the same manner as other credit card purchases. Accordingly, Contractor must presently have the ability to accept these credit cards or take whatever steps necessary to implement the ability before the start of the contract term, or contract award by the City. All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

OR

The City shall make payment to the Contractor by check.

7.8 PCI (Payment Card Industry) Compliance **[This section does not apply to check Payments. Include this section ONLY when Payment will be made by P-Card]**

Contractor agrees to comply with all applicable state, federal and international laws, as well as industry best practices, governing the collection, access, use, disclosure, safeguarding and destruction of Protected Information.

SAMPLE CONSTRUCTION AGREEMENT

Contractor and/or any subcontractor that handles credit card data must be, and remain, PCI compliant under the current standards and will provide documentation confirming compliance upon request by the City of Fort Lauderdale. Failure to produce documentation could result in termination of the contract.

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 Bid Price and that the project can be completed for the Bid 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 Bid Price and that the Project can be completed for the Bid 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.

SAMPLE CONSTRUCTION AGREEMENT

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.

SAMPLE CONSTRUCTION AGREEMENT

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 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 bids. 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, including Florida Law, the City Code of Ordinances, and any other applicable law. 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.

SAMPLE CONSTRUCTION AGREEMENT

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.

SAMPLE CONSTRUCTION AGREEMENT

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 electronic drawings files. 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.

SAMPLE CONSTRUCTION AGREEMENT

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 entitles 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.

SAMPLE - DISTRIBUTION AGREEMENT

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

SAMPLE CONSTRUCTION AGREEMENT

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 sub-contractors, 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

SAMPLE CONSTRUCTION AGREEMENT

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 Contractor under the Contract Documents promptly and shall make payments to the Contractor in accordance with the terms of the agreement herein.

9.2 After the Contractor meets the City's requirements in the Code of Ordinances, and any other applicable law, 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 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

SAMPLE CONSTRUCTION AGREEMENT

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 Agreement 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 (2024), 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.

SAMPLE CONSTRUCTION AGREEMENT

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, Contractor shall, at its sole expense, 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 Contractor. Contractor shall provide the City a certificate of insurance evidencing such coverage. Contractor's insurance coverage shall be primary insurance for all applicable policies, in respect to the City's interests for this Agreement. The limits of coverage under each policy maintained by Contractor shall not be interpreted as limiting 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 Contractor for assessing the extent or determining appropriate types and limits of coverage to protect 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 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 municipality, its officials, employees, and volunteers are to be included 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 Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

Pollution and Remediation Legal Liability (Hazardous Materials)
For the purpose of this section, the term "hazardous materials" includes all materials and substances that are designated or defined as hazardous by Florida or federal law or by the rules or regulations of Florida or any federal agency. If work being performed involves hazardous materials, Contractor shall procure and maintain any or all of the following coverages (which will be specifically addressed upon review of exposure):

Contractors Pollution Liability Coverage

SAMPLE CONSTRUCTION AGREEMENT

For sudden and gradual occurrences and in an amount not less than $1,000,000 per claim arising out of this Agreement, including but not limited to, all hazardous materials identified under the 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 Contractor does not own vehicles, 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.

Contractor waives, and Contractor shall ensure that 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.

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

Insurance Certificate Requirements

i. 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. 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 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 Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, 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 included as an Additional Insured on all liability policies, with the exception of Workers' Compensation.

o. The City shall be granted a Waiver of Subrogation on Contractor's Workers' Compensation insurance policy.

SAMPLE CONSTRUCTION AGREEMENT

p. The title of the Agreement, Bid/Contract number, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:
City of Fort Lauderdale
c/o Procurement Services Division
401 SE 21st Street
Fort Lauderdale, FL 33316

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 application of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for including the City as an Additional Insured shall be at Contractor's expense.

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

Contractor's insurance coverage shall be primary insurance in respect to the City's interests for this Agreement, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City shall be non-contributory.

Any exclusion or provision in any insurance policy maintained by 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 Agreement work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage may be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate of insurance 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.

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

It is Contractor's responsibility to ensure that any and all of 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 Contractor. The City reserves the right to adjust insurance limits from time to time at its discretion with notice to 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 bid 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.

SAMPLE CONSTRUCTION AGREEMENT

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

SAMPLE CONSTRUCTION AGREEMENT

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

SAMPLE CONSTRUCTION AGREEMENT

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, agents, volunteers, 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.

SAMPLE CONSTRUCTION AGREEMENT

12.2.2 Contractor agrees to indemnify, defend, and hold harmless the City, its representatives, agents, volunteers, employees, and appointed and elected officials 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 (2024), 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 fully executed Change Order, the Contractor shall proceed with the

SAMPLE CONSTRUCTION AGREEMENT

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.

SAMPLE CONSTRUCTION AGREEMENT

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 an approved and fully executed 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, expediters, 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.

SAMPLE CONSTRUCTION AGREEMENT

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

SAMPLE CONSTRUCTION AGREEMENT

profit percentage for the Contractor and each subcontractor shall be itemized separately.

ARTICLE 15 – CHANGE OF THE CONTRACT TIME

15.1 The Contract Time may only be changed by an approved and fully executed 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 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

SAMPLE CONSTRUCTION AGREEMENT

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.

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 Agreement, 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 date set forth in the Notice to Proceed, or fails to perform the Work with sufficient

SAMPLE CONSTRUCTION AGREEMENT

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 Contactor 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 notice 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 below in Section 17.5.

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 Contactor 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

SAMPLE CONSTRUCTION AGREEMENT

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 additional 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).

SAMPLE CONSTRUCTION AGREEMENT

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 accepted by the City and costs reasonably incurred by Contractor relating to commitments which had become firm prior to the termination. No payment shall be made for profit for work/services which have not been performed or accepted.

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

SAMPLE CONSTRUCTION AGREEMENT

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:

Danica Grujicic
Senior Project Manager
City of Fort Lauderdale
290 NE 3rd Avenue
Fort Lauderdale, Florida 33301-1016
Telephone: (954) 828-5734
E-mail: dgrujicic@fortlauderdale.gov

with copies to:

City Manager
City of Fort Lauderdale
401 SE 21st Street
Fort Lauderdale, FL 33316

and

City Attorney
City of Fort Lauderdale
1 East Broward Blvd, Suite 1605
Fort Lauderdale, FL 33301-1016

To the Contractor:

_____
_____
_____
Telephone: _____
E-mail: _____

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.

SAMPLE CONSTRUCTION AGREEMENT

20.2 Sovereign Immunity: Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended either to be a waiver of the Sovereign Immunity limitation placed upon the City's liability as set forth in Section 768.28, Florida Statutes (2024), as may be amended or revised, or to extend the City's liability beyond the limits established in said Section 768.28, Florida Statutes (2024), 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.

20.3 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 in Broward County. **BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY AND ALL RIGHTS EITHER PARTY MIGHT HAVE TO A TRIAL BY JURY REGARDING THIS AGREEMENT OR 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.**

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

SAMPLE CONSTRUCTION AGREEMENT

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:

The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2024), 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 (2024), as may be amended or revised, or been placed on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2024), as may be amended or revised, or is engaged in a boycott of Israel.

22.8 Public Entity Crimes: In accordance with the Public Crimes Act, Section 287.133, Florida Statutes (2024), 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

SAMPLE CONSTRUCTION AGREEMENT

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 (2024), 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: In the event it becomes necessary for either party herein to seek legal means to enforce the terms of the Agreement, the prevailing Party shall be entitled to its reasonable attorney fees.

22.10 Public Records

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES (2024), 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, 1 EAST BROWARD BOULEVARD, SUITE 444 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 (2024), 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 Non-Discrimination

SAMPLE CONSTRUCTION AGREEMENT

The Contractor shall not discriminate against its employees based on the employee's race, color, religion, gender, gender identity, gender expression, marital status, sexual orientation, national origin, age, disability, or any other protected classification as defined by applicable law.

1. The Contractor certifies and represents that the Contractor offers the same health benefits to the domestic partners of its employees as are offered its employees' spouses or offers its employees the cash equivalent of such health benefits because it is unable to provide health benefits to its employees' domestic partners, and that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.

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.

22.13 E-Verify

448.095, Florida Statutes (2024), 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 Subsection 448.09(1), Florida Statutes (2024), as may be amended or revised, shall terminate the contract with the person or entity.

3. The City, upon good faith belief that a subcontractor knowingly violated the provisions of Subsection 448.095(5), Florida Statutes (2024), as may be amended or revised, but that the Contractor otherwise complied with Subsection 448.095(5), Florida Statutes (2024), 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.

SAMPLE CONSTRUCTION AGREEMENT

4. A contract terminated under Subparagraph 448.095(5)(c)1. or 2., Florida Statutes (2024), as may be amended or revised, is not a breach of contract and may not be considered as such. If the City terminates this contract under Paragraph 448.095(5)(c), Florida Statutes (2024), 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 contract 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, including this subparagraph, requiring any and all subcontractors, as defined in Subsection 448.095(1)(e), Florida Statutes (2024), as may be amended or revised, to include all of the requirements of this Section in their subcontracts. Contractor shall be responsible for compliance by any and all subcontractors, as defined in Subsection 448.095(1)(e), Florida Statutes (2024), as may be amended or revised, with the requirements of Section 448.095, Florida Statutes (2024), as may be amended or revised.

22.14 Anti-Human Trafficking:

As a condition precedent to the effectiveness of this Agreement, the Contractor shall provide the City with an affidavit signed by an officer or a representative of the Contractor under penalty of perjury attesting that the Contractor does not use coercion for labor or services as defined in Section 787.06, Florida Statutes (2024), as may be amended or revised.

22.15 Foreign Countries Of Concern:

As a condition precedent to the effectiveness of this Agreement, the Contractor shall provide the City with an affidavit signed by an officer or representative of the Contractor under penalty of perjury attesting that the Contractor does not meet any of the criteria in paragraphs (2)(a)-(c) of Section 287.138, Florida Statutes (2024), as may be amended or revised.

22.16 Default:

In the event the Contractor fails to comply with the provisions of this Agreement, the City may declare the Contractor in default and notify it in writing, giving a reasonable time to cure the default, but in no event shall this time period exceed five (5) calendar days unless otherwise agreed to by the parties. In such event, the Contractor shall only be compensated for any services completed as of the date written notice of default is served.

22.17 Severability:

If any portions of this Agreement shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof, and this Agreement shall be construed and enforced as if such provisions had not been included.

[THIS SPACE WAS INTENTIONALLY LEFT BLANK]

SAMPLE CONSTRUCTION AGREEMENT

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: _____
SUSAN GRANT
Acting City Manager

Date: _____

ATTEST:

By: _____
DAVID R. SOLOMAN
City Clerk

Approved as to Legal Form and correctness:
D'Wayne Spence, Acting City Attorney

By:_____
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 _____, 2025, 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: _____

SAMPLE CONSTRUCTION AGREEMENT

City of Fort Lauderdale • Procurement Services Division
101 NE 3rd Ave., Suite 1650 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

ADDENDUM NO. 1

ITB No. 479

TITLE: Riverland Road Traffic Calming Improvements

ISSUED: June 12, 2025

This addendum is being issued to make the following clarification:

1. Pre-bid conference is on Jun 19, 2025 at 10am.

All other terms, conditions, and specifications remain unchanged.

Inessa Rubin
Sr. Procurement Specialist

City of Fort Lauderdale • Procurement Services Division
101 NE 3rd Ave, Suite 1650 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

ADDENDUM NO. 2

Invitation to Bid No. 479

TITLE: Riverland Road Traffic Calming Improvements

ISSUED: July 1, 2025

This addendum is being issued to make the following changes and clarifications. Words in ~~strikethrough~~ type are deletions from existing text. Words in **bold underlined** type are additions to existing text.

1. Additional Optional line items have been added:
   - **Alternate Bid 1, lines 52-88**
   - **Alternate Bid 2, lines 89-116**
   - **Alternate Bid 3, lines 117-148**

2. Line 34 has been revised: '**BLUE** TYPE B RAISED PAVEMENT MARKER, Qty = ~~23~~ **3**

3. Line 149 has been added: **YELLOW TYPE B RAISED PAVEMENT MARKER, Qty=20**

4. ~~Line 27 UTILITY FIXTURE, METER BOX, ADJU~~ has been removed from the solicitation.

5. ~~Line 28: MIDBLOCK CROSSWALK: REC RAPID FLASHING BEACON, FURNISH/INSTALL - SOLAR, SIGN ASSEMBLY, SINGLE DIR. ACCESSIBLE DETECTOR~~ has been removed from the solicitation.

All other terms, conditions, and specifications remain unchanged.

Inessa Rubin
Sr. Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

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

ADDENDUM NO. 3

ITB No. 479
Riverland Road Traffic Calming Improvements

ISSUED: July 15, 2025

This addendum is being issued to make the following changes:

1. The Bid Due Date has been extended **to July 22, 2025, at 2:00 pm (local time).**

All other terms, conditions, and specifications remain unchanged.

Inessa Rubin
Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

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

ADDENDUM NO. 4

ITB No. 479
Riverland Road Traffic Calming Improvements

ISSUED: July 22, 2025

This Addendum is issued to communicate the update below.

Summary of Previous Addenda

- **Addendum 1**: Confirmed Pre-Bid Conference scheduled for June 19, 2025, at 10:00 AM.

- **Addendum 2:**
  Mandatory Line Items Updated:
  - Line 34: Updated
  - Line 149: Added
  - Lines 27 and 28: Removed

  Optional Line Items Added:
  - Alternate Bid 1, lines 52-88
  - Alternate Bid 2, lines 89-116
  - Alternate Bid 3, lines 117-148

- **Addendum 3**: Extended Bid Due Date to July 22, 2025, at 2:00 PM (local time).

Current Addendum No. 4

The Bid Due Date has been extended to **Tuesday, July 29, 2025, at 2:00 PM (local time).** All other terms, conditions, and specifications remain unchanged.

Inessa Rubin

Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

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

ADDENDUM NO. 5

ITB No. 479
Riverland Road Traffic Calming Improvements

ISSUED: July 29, 2025

This Addendum is issued to communicate the update below.

Summary of Previous Addenda

- **Addendum 1**: Confirmed Pre-Bid Conference scheduled for June 19, 2025, at 10:00 AM.

- **Addendum 2:**
  Mandatory Line Items Updates:
  - Line 34: Updated
  - Line 149: Added
  - Lines 27 and 28: Removed

  Optional Line Items Added:
  - Alternate Bid 1, lines 52-88
  - Alternate Bid 2, lines 89-116
  - Alternate Bid 3, lines 117-148

- **Addendum 3**: Extended Bid Due Date to **July 22, 2025, at 2:00 PM (local time).**

- **Addendum 4:** Extended Bid Due Date to **Tuesday, July 29, 2025, at 2:00 PM (local time).**

Current Addendum No. 5

The Bid Due Date has been extended to **Tuesday, August 5, 2025, at 2:00 PM (local time).** All other terms, conditions, and specifications remain unchanged.

Inessa Rubin

Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

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

Date: _____

Executive Summary Report

Of

Event: 479-7 - Riverland Road Traffic Calming

Buyer: INESSA RUBIN

Date Range: 06/12/2025 06:00:00 PM - 08/05/2025 02:00:00 PM

Suppliers Notified: 545

Notified Suppliers Responding: 4

All Suppliers Responding: 4

Suppliers Responding

Supplier	Contact	Phone Number	E Mail	City	State Or Province	Total Bid Amount	Total Awarded	Response Attachment Exists
Team Contracting, Inc.	Daniel Gell	305-207-9799	dgell@team-contracting.com	Miami	FL	2,177,561.00	0.00	No
Weekley Asphalt Paving, Inc.	Daniel Weekley	305-680-8005	eduardo@weekleyasp.com	Pembroke Oines	FL	1,449,179.16	0.00	No
Sagaris Corp	Mehrdad Mahmoudi	9546883407	office@sagariscorp.com	Coral Springs	FL	1,152,735.20	0.00	Yes
Florida Blacktop, Inc.	Elias Shaouy	9549439700	leeshaouy@gmail.com	Pompano Beach	FL	1,991,430.31	0.00	Yes

Event Lines And Responses

Item	Description	Unit of Measure	Quantity
MOBILIZATION & DEMOBILIZATION-	The lump sum price for this item should be full compensation for mobilization and demobilization activities. This includes, but is not limited to, Performance and Payment Guarantee and Insurance, scheduling, project coordination, labor associated with permit acquisition (excluding those permits detailed and paid for under other bid items), temporary facilities, staging areas, site access, field offices, distribution of flyers to the affected residents and businesses, project signs, finish grading, site cleanup, and all other activities necessary to prepare and complete the contract work. Partial payments for mobilization and demobilization should be made in accordance with Specification Section 01025.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	25,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	38,519.000	0.00
Sagaris Corp	1.0000	LS	70,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	145,000.000	0.00

Item	Description	Unit of Measure	Quantity
MAINTENANCE OF TRAFFIC-	The lump sum price for this item should be full compensation for all labor, equipment, material, and work required for maintenance of traffic in accordance with FDOT Standards and/or Broward County and/or the CITY of Fort Lauderdale. This item includes, but is not limited to, preparation and submittal of maintenance of traffic plans (MOTs), addressing comments regarding MOTs from agencies with jurisdiction, providing personnel as required to direct traffic (flaggers, crossing guards, local police, etc.), all temporary signage and striping, message boards, barricades, temporary barrier walls, drums, cones, providing signs, lights, installing temporary fencing and walkways as required to maintain pedestrian traffic, installing temporary steel plates for vehicular traffic and all other work incidental to the maintenance of traffic as required by FDOT Standards and/or Broward County and/or the requirements of the CITY of Fort Lauderdale and the Contract Documents. Payment for Maintenance of Traffic should not exceed 3% of the sum of Bid Item Nos. 6 through 38 and will be made in equal monthly amounts during the duration of the Contract Time.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	40,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	39,637.000	0.00
Sagaris Corp	1.0000	LS	50,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	127,050.000	0.00

Item	Description	Unit of Measure	Quantity
SEDIMENT BARRIER-	Payment for this item should be made at the Contractor's Unit Price per linear foot of sediment barrier installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to furnish, install and maintain the sediment barrier in accordance with the plans and specifications.	LF	981.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	981.0000	LF	12.000	0.00
Weekley Asphalt Paving, Inc.	981.0000	LF	2.500	0.00
Sagaris Corp	981.0000	LF	5.000	0.00
Florida Blacktop, Inc.	981.0000	LF	5.000	0.00

Item	Description	Unit of Measure	Quantity
INLET PROTECTION SYSTEM-	Payment for this item should be made at the Contractor's Unit Price per each of inlet protection installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to furnish, install and maintain the inlet protection system in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	155.000	0.00
Sagaris Corp	4.0000	EA	250.000	0.00
Florida Blacktop, Inc.	4.0000	EA	250.000	0.00

Item	Description	Unit of Measure	Quantity
CLEARING & GRUBBING-	Payment for this item should be made on a Lump Sum (LS) basis. The Contractor's unit price should include full compensation for all excavation necessary within theroad right of way including debris removal, grading, and any other required clearing and grubbing in accordance with the plans and specifications, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.	AC	0.1500

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	0.1500	AC	60,000.000	0.00
Weekley Asphalt Paving, Inc.	0.1500	AC	208,920.000	0.00
Sagaris Corp	0.1500	AC	10,000.000	0.00
Florida Blacktop, Inc.	0.1500	AC	482,000.000	0.00

Item	Description	Unit of Measure	Quantity
REMOVAL OF EXISTING CONCRETE-	Payment for this item should be made at the Contractor's Unit Price per square yard of material excavated. The Contractor's unit price should include full compensation for all removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material, Trench Safety Compliance and removal of all extraneous excavated materials in accordance with the plans and specifications.	SY	421.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	421.0000	SY	27.000	0.00
Weekley Asphalt Paving, Inc.	421.0000	SY	51.420	0.00
Sagaris Corp	421.0000	SY	20.000	0.00
Florida Blacktop, Inc.	421.0000	SY	70.000	0.00

Item	Description	Unit of Measure	Quantity
MILLING EXIST ASPH PAVT, 1" AVG-	Payment for this item should be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 1” removed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to remove 1” asphaltic concrete in accordance with the plans and specifications.	SY	2,046.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2,046.0000	SY	5.000	0.00
Weekley Asphalt Paving, Inc.	2,046.0000	SY	30.000	0.00
Sagaris Corp	2,046.0000	SY	10.000	0.00
Florida Blacktop, Inc.	2,046.0000	SY	5.500	0.00

Item	Description	Unit of Measure	Quantity
MILLING EXIST ASPH PAVT, 2.5" AV-	Payment for this item should be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 2.5” removed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to remove 2.5” asphaltic concrete in accordance with the plans and specifications.	SY	251.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	251.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	251.0000	SY	30.000	0.00
Sagaris Corp	251.0000	SY	15.000	0.00
Florida Blacktop, Inc.	251.0000	SY	45.000	0.00

Item	Description	Unit of Measure	Quantity
SUPERPAVE ASPHALTIC CONCRETE, TR-	Payment for this item should be made at the Contractor's Unit Price per ton of Superpave Asphaltic Concrete installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the Superpave Asphaltic Concrete in accordance with the plans and specifications.	TN	751.9000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	751.9000	TN	350.000	0.00
Weekley Asphalt Paving, Inc.	751.9000	TN	300.000	0.00
Sagaris Corp	751.9000	TN	260.000	0.00
Florida Blacktop, Inc.	751.9000	TN	280.000	0.00

Item	Description	Unit of Measure	Quantity
INLETS, CURB, TYPE P-6, <10'-	Payment for this item should be made at the Contractor's Unit Price per each inlet, manhole, or junction structure installed and accepted. The Contract Unit Price should include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, pollution retardant baffles, grout, brick, shoring, trenching, equipment or any other items required to install the inlets, manholes, or junction structure complete in place in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	11,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	12,000.000	0.00
Sagaris Corp	1.0000	EA	6,000.000	0.00
Florida Blacktop, Inc.	1.0000	EA	15,800.000	0.00

Item	Description	Unit of Measure	Quantity
INLETS, DT BOT, TYPE C, <10'-	Payment for this item should be made at the Contractor's Unit Price per each inlet, manhole, or junction structure installed and accepted. The Contract Unit Price should include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, pollution retardant baffles, grout, brick, shoring, trenching, equipment or any other items required to install the inlets, manholes, or junction structure complete in place in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	9,000.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	8,900.000	0.00
Sagaris Corp	2.0000	EA	6,000.000	0.00
Florida Blacktop, Inc.	2.0000	EA	10,770.000	0.00

Item	Description	Unit of Measure	Quantity
INLETS, DT BOT, TYPE E, <10'-	Payment for this item should be made at the Contractor's Unit Price per each inlet, manhole, or junction structure installed and accepted. The Contract Unit Price should include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, pollution retardant baffles, grout, brick, shoring, trenching, equipment or any other items required to install the inlets, manholes, or junction structure complete in place in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	15,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	12,000.000	0.00
Sagaris Corp	1.0000	EA	6,000.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	1.0000	EA	21,540.000	0.00

Item	Description	Unit of Measure	Quantity
MANHOLES, P-8, <10'-	Payment for this item should be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	12,000.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	10,500.000	0.00
Sagaris Corp	2.0000	EA	6,000.000	0.00
Florida Blacktop, Inc.	2.0000	EA	14,360.000	0.00

Item	Description	Unit of Measure	Quantity
MANHOLE, ADJUST-	Payment for this item should be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	750.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Sagaris Corp	4.0000	EA	1,900.000	0.00
Florida Blacktop, Inc.	4.0000	EA	2,155.000	0.00

Item	Description	Unit of Measure	Quantity
MANHOLE, ADJUST, UTILITIES-	Payment for this item should be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	3,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	950.000	0.00
Sagaris Corp	1.0000	EA	1,700.000	0.00
Florida Blacktop, Inc.	1.0000	EA	2,155.000	0.00

Item	Description	Unit of Measure	Quantity
VALVE BOXES, ADJUST-	Payment for this item should be made at the Contractor's Unit Price per each of valve adjustments installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to adjust valves shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	7.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	7.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	7.0000	EA	600.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Sagaris Corp	7.0000	EA	350.000	0.00
Florida Blacktop, Inc.	7.0000	EA	1,436.000	0.00

Item	Description	Unit of Measure	Quantity
METER BOXES, ADJUST-	Payment for this item should be made at the Contractor's Unit Price per each of meter box adjustments installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to adjust meter boxes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	3.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	3.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	3.0000	EA	450.000	0.00
Sagaris Corp	3.0000	EA	350.000	0.00
Florida Blacktop, Inc.	3.0000	EA	1,436.000	0.00

Item	Description	Unit of Measure	Quantity
ROUND 12" S/CD PIPE CULVERT, OPT-	Payment for this item should be made at the Contractor's Unit Price per linear foot of pipe installed and accepted. The Contract Unit Price should include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, grout, brick, shoring, trenching, equipment or any other items required to install the pipe complete in place in accordance with the plans and specifications.	LF	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LF	200.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	1.0000	LF	190.000	0.00
Sagaris Corp	1.0000	LF	120.000	0.00
Florida Blacktop, Inc.	1.0000	LF	4,300.000	0.00

Item	Description	Unit of Measure	Quantity
ROUND 18" S/CD PIPE CULVERT, OPT-	Payment should be made for 18” pipe culvert installed by authorization of the Consultant. Any 18” pipe culvert that is damaged incidental to construction or defective should be repaired at the Contractor's expense.	LF	169.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	169.0000	LF	150.000	0.00
Weekley Asphalt Paving, Inc.	169.0000	LF	360.000	0.00
Sagaris Corp	169.0000	LF	150.000	0.00
Florida Blacktop, Inc.	169.0000	LF	575.000	0.00

Item	Description	Unit of Measure	Quantity
ROUND 24" S/CD IPE CULVERT, OPTI-	Payment for this item should be made at the Contractor's Unit Price per linear foot of pipe installed and accepted. The Contract Unit Price should include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, grout, brick, shoring, trenching, equipment or any other items required to install the pipe complete in place in accordance with the plans and specifications.	LF	8.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	8.0000	LF	200.000	0.00
Weekley Asphalt Paving, Inc.	8.0000	LF	595.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Sagaris Corp	8.0000	LF	170.000	0.00
Florida Blacktop, Inc.	8.0000	LF	1,150.000	0.00

Item	Description	Unit of Measure	Quantity
CONCRETE CURB AND GUTTER, TYPE F-	Payment for this item should be made at the Contractor's Unit Price per linear foot of concrete curb installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the concrete curb complete in place in accordance with the plans and specifications.	LF	780.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	780.0000	LF	50.000	0.00
Weekley Asphalt Paving, Inc.	780.0000	LF	73.870	0.00
Sagaris Corp	780.0000	LF	60.000	0.00
Florida Blacktop, Inc.	780.0000	LF	72.000	0.00

Item	Description	Unit of Measure	Quantity
CONCRETE SIDEWALKS AND DRIVEWAYS-	Payment for this item should be made at the Contractor's Unit Price per square yard of concrete sidewalk and driveway (6” thick) installed and accepted. The ContractUnit Price should include compensation for all labor, material, and equipment required to install the concrete sidewalk or driveway in accordance with the plans and specifications.	SY	431.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	431.0000	SY	126.000	0.00
Weekley Asphalt Paving, Inc.	431.0000	SY	73.030	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Sagaris Corp	431.0000	SY	125.000	0.00
Florida Blacktop, Inc.	431.0000	SY	123.000	0.00

Item	Description	Unit of Measure	Quantity
PATTERNED PAVEMENT, VEHICULAR AR-	Payment for this item should be made at the Contractor's Unit Price per square yard of patterned pavement installed and accepted. The Contract Unit Price should include compensation for all labor, material, equipment or any other items required to install the patterned pavement in accordance with the plans and specifications. Payment should be made for Patterned Pavement, Vehicular Areas constructed or replaced by authorization of the Consultant. Any patterned pavement that is damaged incidental to construction or defective should be replaced at the Contractor's expense.	SY	779.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	779.0000	SY	280.000	0.00
Weekley Asphalt Paving, Inc.	779.0000	SY	144.210	0.00
Sagaris Corp	779.0000	SY	140.000	0.00
Florida Blacktop, Inc.	779.0000	SY	155.000	0.00

Item	Description	Unit of Measure	Quantity
DETECTABLE WARNING-	Payment for this item should be made at the Contractor's Unit Price per square foot of detectable warning installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the detectable warning in accordance with the plans and specifications.	SF	85.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	85.0000	SF	50.000	0.00
Weekley Asphalt Paving, Inc.	85.0000	SF	43.000	0.00
Sagaris Corp	85.0000	SF	40.000	0.00
Florida Blacktop, Inc.	85.0000	SF	64.000	0.00

Item	Description	Unit of Measure	Quantity
PERFORMANCE TURF, SOD-	Payment for this item should be made on a square yard basis. The Contractor's unit price should include full compensation for all sodding within the road right of way as indicated on the plans. The Contractor's unit price should constitute full compensation for all labor, materials, and equipment required for excavation, grading, hauling, placing, compacting, and dressing of the surface of the swales in preparation for sodding, placement, and establishment. Any sod that is damaged incidental to construction or defective should be replaced at the Contractor’s expense. Includes 2” of independent topsoil.	SY	487.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	487.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	487.0000	SY	8.320	0.00
Sagaris Corp	487.0000	SY	10.000	0.00
Florida Blacktop, Inc.	487.0000	SY	11.500	0.00

Item	Description	Unit of Measure	Quantity
PULL & SPLICE BOX, F&I, 13"X24"-	Payment for this item should be made at the Contractor's Unit Price per each pull box installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the pull box in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	4,000.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	2,133.000	0.00
Sagaris Corp	2.0000	EA	500.000	0.00
Florida Blacktop, Inc.	2.0000	EA	2,770.000	0.00

Item	Description	Unit of Measure	Quantity
UTILITY FIXTURE, METER BOX, ADJU-	Payment for this item should be made at the Contractor's Unit Price per each of meter box adjustments installed and accepted. The Contract Unit Price should include compensation for labor, material, and equipment required to adjust meter boxes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	1.0000
MIDBLOCK CROSSWALK: REC RAPID FL-	Payment for this item should be made at the Contractor's Unit Price per sign assembly furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications. Payment should be made for Single Post Sign Assembly installed by authorization of the Consultant. Any signs that are damaged incidental to construction should be replaced at the Contractor's expense.	AS	1.0000
SINGLE COLUMN GROUND SIGN ASSEMB-	Payment for this item should be made at the Contractor's Unit Price per each sign assembly furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications.	EA	25.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	25.0000	EA	2,500.000	0.00
Weekley Asphalt Paving, Inc.	25.0000	EA	800.000	0.00
Sagaris Corp	25.0000	EA	800.000	0.00
Florida Blacktop, Inc.	25.0000	EA	800.000	0.00

Item	Description	Unit of Measure	Quantity
SINGLE POST SIGN, RELOCATE-	Payment for this item should be made at the Contractor's Unit Price per each sign assembly relocated and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.	EA	9.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	9.0000	EA	1,000.000	0.00
Weekley Asphalt Paving, Inc.	9.0000	EA	190.000	0.00
Sagaris Corp	9.0000	EA	140.000	0.00
Florida Blacktop, Inc.	9.0000	EA	590.000	0.00

Item	Description	Unit of Measure	Quantity
SINGLE POST SIGN, REMOVE-	Payment for this item should be made at the Contractor’s Unit Price per each sign assembly removed. The Contractor's unit price should include full compensation for all removing and disposing of existing sign panels, posts and ground attachments, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material and removal of all extraneous materials in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	20.000	0.00
Sagaris Corp	1.0000	EA	100.000	0.00
Florida Blacktop, Inc.	1.0000	EA	215.000	0.00

Item	Description	Unit of Measure	Quantity
ENHANCED HIGHWAY SIGN ASSEMBLY,-	Payment for this item should be made at the Contractor's Unit Price per each sign assembly relocated and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	15,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	13,645.000	0.00
Sagaris Corp	1.0000	EA	7,500.000	0.00
Florida Blacktop, Inc.	1.0000	EA	17,630.000	0.00

Item	Description	Unit of Measure	Quantity
OBJECT MARKER, TYPE 1-	Payment for this item should be made at the Contractor's Unit Price per each object marker furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the object markers in accordance with the plans and specifications.	EA	1.0000

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	2,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	350.000	0.00
Sagaris Corp	1.0000	EA	400.000	0.00
Florida Blacktop, Inc.	1.0000	EA	360.000	0.00

Item	Description	Unit of Measure	Quantity
TYPE B RAISED PAVEMENT MARKER,-		EA	3.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	3.0000	EA	80.000	0.00
Weekley Asphalt Paving, Inc.	3.0000	EA	5.000	0.00
Sagaris Corp	3.0000	EA	15.000	0.00
Florida Blacktop, Inc.	3.0000	EA	16.000	0.00

Item	Description	Unit of Measure	Quantity
TYPE F INTERNALLY ILLUMINATED RA-	Payment should be made for each Raised Pavement Marker installed by authorization of the Consultant. Any Raised Pavement Marker that are damaged incidental to construction should be replaced at the Contractor's expense. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	18.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	18.0000	EA	700.000	0.00
Weekley Asphalt Paving, Inc.	18.0000	EA	445.000	0.00
Sagaris Corp	18.0000	EA	300.000	0.00

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	18.0000	EA	519.990	0.00

Item	Description	Unit of Measure	Quantity
YELLOW, ISLAND NOSE PAINTED PAVE-	Payment for this item should be made at the Contractor's Unit Price per square foot of striping installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications. Payment should be made for each square foot of Painted Pavement Markings, Standard, Yellow Island Nose installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective should be replaced at the Contractor's expense.	LF	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LF	50.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LF	6.200	0.00
Sagaris Corp	1.0000	LF	85.000	0.00
Florida Blacktop, Inc.	1.0000	LF	2.000	0.00

Item	Description	Unit of Measure	Quantity
PAINTED PAVEMENT MARKINGS, FINAL-	Payment for this item should be made on a Lump Sum Basis. The Contractor's unit price should include full compensation for the painted pavement markings including, striping, messages, symbols, arrows or other similar pavement markings in accordance with the specifications.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	30,000.000	0.00

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	1.0000	LS	7,425.000	0.00
Sagaris Corp	1.0000	LS	4,830.000	0.00
Florida Blacktop, Inc.	1.0000	LS	5,975.000	0.00

Item	Description	Unit of Measure	Quantity
WHITE, SOLID, 12 FOR CROSSWALK A-	711-11123 – Thermoplastic, Standard, White, Solid, 12” for Crosswalk and Roundabout: Payment for this item should be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	209.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	209.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	209.0000	LF	2.400	0.00
Sagaris Corp	209.0000	LF	3.500	0.00
Florida Blacktop, Inc.	209.0000	LF	3.600	0.00

Item	Description	Unit of Measure	Quantity
WHITE, SOLID, 24" FOR STOP LINE-	711-11125 – Thermoplastic, Standard, White, Solid, 24” for Stop Line and Crosswalk: Payment for this item should be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	66.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	66.0000	LF	40.000	0.00
Weekley Asphalt Paving, Inc.	66.0000	LF	37.000	0.00
Sagaris Corp	66.0000	LF	7.500	0.00
Florida Blacktop, Inc.	66.0000	LF	8.250	0.00

Item	Description	Unit of Measure	Quantity
WHITE, VERTICAL DEFLECTION MARKI-	Payment for this item should be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	12.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	12.0000	EA	1,400.000	0.00
Weekley Asphalt Paving, Inc.	12.0000	EA	306.000	0.00
Sagaris Corp	12.0000	EA	205.000	0.00
Florida Blacktop, Inc.	12.0000	EA	93.000	0.00

Item	Description	Unit of Measure	Quantity
WHITE, 2-4 DOTTED GUIDELINE/ 6-1-	WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6”: Payment for this item should be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	401.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	401.0000	LF	10.000	0.00
Weekley Asphalt Paving, Inc.	401.0000	LF	1.400	0.00
Sagaris Corp	401.0000	LF	3.500	0.00
Florida Blacktop, Inc.	401.0000	LF	1.500	0.00

Item	Description	Unit of Measure	Quantity
WHITE, MESSAGE OR SYMBOL THERMOP-	WHITE, MESSAGE OR SYMBOL: Payment for this item should be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	223.000	0.00
Sagaris Corp	1.0000	EA	700.000	0.00
Florida Blacktop, Inc.	1.0000	EA	240.000	0.00

Item	Description	Unit of Measure	Quantity
WHITE, YIELD LINE THERMOPLASTIC,-	WHITE, YIELD LINE: Payment for this item should be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LF	70.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LF	6.110	0.00
Sagaris Corp	1.0000	LF	85.000	0.00
Florida Blacktop, Inc.	1.0000	LF	50.000	0.00

Item	Description	Unit of Measure	Quantity
YELLOW, SOLID, 18" FOR DIAGONALS-	YELLOW, SOLID, 18” FOR DIAGONAL OR CHEVRON: Payment for this item should be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LF	70.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LF	3.700	0.00
Sagaris Corp	1.0000	LF	10.000	0.00
Florida Blacktop, Inc.	1.0000	LF	5.500	0.00

Item	Description	Unit of Measure	Quantity
YELLOW, 2-4 DOTTED GUIDELINE/6-1-	STANDARD YELLOW, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6”: Payment for this item should be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	306.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	306.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	306.0000	LF	1.400	0.00
Sagaris Corp	306.0000	LF	3.500	0.00
Florida Blacktop, Inc.	306.0000	LF	1.750	0.00

Item	Description	Unit of Measure	Quantity
WHITE, SOLID, 24 FOR CROSSWALK T-	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24” FOR CROSSWALK: Payment should be made for each linear foot of Thermoplastic, Preformed, Pavement Striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective should be replaced at the Contractor's expense.	LF	120.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	120.0000	LF	40.000	0.00
Weekley Asphalt Paving, Inc.	120.0000	LF	4.650	0.00
Sagaris Corp	120.0000	LF	7.500	0.00
Florida Blacktop, Inc.	120.0000	LF	36.000	0.00

Item	Description	Unit of Measure	Quantity
WHITE, MESSAGE THERMOPLASTIC, PR-	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE: Payment for this item should be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	6.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	6.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	6.0000	EA	500.000	0.00
Sagaris Corp	6.0000	EA	350.000	0.00
Florida Blacktop, Inc.	6.0000	EA	395.000	0.00

Item	Description	Unit of Measure	Quantity
WHITE, ARROW THERMOPLASTIC, PREF-	THERMOPLASTIC, PREFORMED, WHITE, ARROW: Payment for this item should be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	6.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	6.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	6.0000	EA	500.000	0.00
Sagaris Corp	6.0000	EA	175.000	0.00
Florida Blacktop, Inc.	6.0000	EA	215.000	0.00

Item	Description	Unit of Measure	Quantity
WHITE, SOLID, 6 THERMOPLASTIC, S-	THERMOPLASTIC, STANDARD – OTHER SURFACES, WHITE, SOLID 6”: Payment for this item should be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	871.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	871.0000	LF	10.000	0.00
Weekley Asphalt Paving, Inc.	871.0000	LF	1.400	0.00
Sagaris Corp	871.0000	LF	1.650	0.00
Florida Blacktop, Inc.	871.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
YELLOW, SOLID, 6 THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, YELLOW, SOLID 6”: Payment for this item should be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	739.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	739.0000	LF	10.000	0.00
Weekley Asphalt Paving, Inc.	739.0000	LF	1.400	0.00
Sagaris Corp	739.0000	LF	1.650	0.00
Florida Blacktop, Inc.	739.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
GREEN-COLORED PAVEMENT MARKINGS,-	Payment for this item should be made at the Contractor's Unit Price per square foot of green colored pavement installed and accepted. The Contract Unit Price should include compensation for all labor, material, and equipment required to install the green colored pavement in accordance with the plans and specifications.	SF	480.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	480.0000	SF	32.000	0.00
Weekley Asphalt Paving, Inc.	480.0000	SF	20.600	0.00
Sagaris Corp	480.0000	SF	20.000	0.00
Florida Blacktop, Inc.	480.0000	SF	21.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: MOBILIZATION & D-	The lump sum price for this item shall be full compensation for mobilization and demobilization activities. This includes, but is not limited to, Performance and Payment Guarantee and Insurance, scheduling, project coordination, labor associated with permit acquisition (excluding those permits detailed and paid for under other bid items), temporary facilities, staging areas, site access, field offices, distribution of flyers to the affected residents and businesses, project signs, finish grading, site cleanup, and all other activities necessary to prepare and complete the contract work. Partial payments for mobilization and demobilization shall be made in accordance with Specification Section 01025.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	25,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	18,210.000	0.00
Sagaris Corp	1.0000	LS	10,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	7,000.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: MAINTENANCE OF T-	The lump sum price for this item shall be full compensation for all labor, equipment, material, and work required for maintenance of traffic in accordance with FDOT Standards and/or Broward County and/or the CITY of Fort Lauderdale. This item includes, but is not limited to, preparation and submittal of maintenance of traffic plans (MOTs), addressing comments regarding MOTs from agencies with jurisdiction, providing personnel as required to direct traffic (flaggers, crossing guards, local police, etc.), all temporary signage and striping, message boards, barricades, temporary barrier walls, drums, cones, providing signs, lights, installing temporary fencing and walkways as required to maintain pedestrian traffic, installing temporary steel plates for vehicular traffic and all other work incidental to the maintenance of traffic as required by FDOT Standards and/or Broward County and/or the requirements of the CITY of Fort Lauderdale and the Contract Documents. Payment for Maintenance of Traffic shall not exceed 3% of the sum of Bid Item Nos. 6 through 38 and will be made in equal monthly amounts during the duration of the Contract Time.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	40,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	18,738.000	0.00
Sagaris Corp	1.0000	LS	3,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	32,000.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: SEDIMENT BARRIE-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of sediment barrier installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the sediment barrier in accordance with the plans and specifications.	LF	485.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	485.0000	LF	12.000	0.00
Weekley Asphalt Paving, Inc.	485.0000	LF	2.500	0.00
Sagaris Corp	485.0000	LF	5.000	0.00
Florida Blacktop, Inc.	485.0000	LF	5.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: INLET PROTECTIO-	Payment for this item shall be made at the Contractor's Unit Price per each of inlet protection installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the inlet protection system in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	155.000	0.00
Sagaris Corp	1.0000	EA	250.000	0.00
Florida Blacktop, Inc.	1.0000	EA	250.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: CLEARING & GRUB-	Payment for this item shall be made on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for all excavation necessary within theroad right of way including debris removal, grading, and any other required clearing and grubbing in accordance with the plans and specifications, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.	AC	0.0300

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	0.0300	AC	60,000.000	0.00
Weekley Asphalt Paving, Inc.	0.0300	AC	493,840.000	0.00
Sagaris Corp	0.0300	AC	10,000.000	0.00
Florida Blacktop, Inc.	0.0300	AC	177,726.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: REMOVAL OF EXIS-	Payment for this item shall be made at the Contractor’s Unit Price per square yard of material excavated. The Contractor's unit price shall include full compensation for all removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material, Trench Safety Compliance and removal of all extraneous excavated materials in accordance with the plans and specifications.	SY	131.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	131.0000	SY	27.000	0.00
Weekley Asphalt Paving, Inc.	131.0000	SY	51.420	0.00
Sagaris Corp	131.0000	SY	20.000	0.00
Florida Blacktop, Inc.	131.0000	SY	70.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: MILLING EXIST A-	Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 1” removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 1” asphaltic concrete in accordance with the plans and specifications.	SY	961.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	961.0000	SY	5.000	0.00
Weekley Asphalt Paving, Inc.	961.0000	SY	30.000	0.00
Sagaris Corp	961.0000	SY	10.000	0.00
Florida Blacktop, Inc.	961.0000	SY	10.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: MILLING EXIST A-	Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 2.5” removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 2.5” asphaltic concrete in accordance with the plans and specifications.	SY	43.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	43.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	43.0000	SY	30.000	0.00
Sagaris Corp	43.0000	SY	15.000	0.00
Florida Blacktop, Inc.	43.0000	SY	260.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 1: SUPERPAVE ASPHA-	Payment for this item shall be made at the Contractor's Unit Price per ton of Superpave Asphaltic Concrete installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Superpave Asphaltic Concrete in accordance with the plans and specifications.	TN	80.8000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	80.8000	TN	350.000	0.00
Weekley Asphalt Paving, Inc.	80.8000	TN	300.000	0.00
Sagaris Corp	80.8000	TN	265.000	0.00
Florida Blacktop, Inc.	80.8000	TN	460.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: MANHOLE, ADJUST-	Payment for this item shall be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	750.000	0.00
Sagaris Corp	1.0000	EA	1,500.000	0.00
Florida Blacktop, Inc.	1.0000	EA	2,155.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: VALVE BOXES, AD-	Payment for this item shall be made at the Contractor's Unit Price per each of valve adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust valves shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	3,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	600.000	0.00
Sagaris Corp	1.0000	EA	450.000	0.00
Florida Blacktop, Inc.	1.0000	EA	1,426.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: CONCRETE CURB A-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of concrete curb installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the concrete curb complete in place in accordance with the plans and specifications.	LF	343.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	343.0000	LF	50.000	0.00
Weekley Asphalt Paving, Inc.	343.0000	LF	73.870	0.00
Sagaris Corp	343.0000	LF	60.000	0.00
Florida Blacktop, Inc.	343.0000	LF	71.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: CONCRETE SIDEWA-	Payment for this item shall be made at the Contractor's Unit Price per square yard of concrete sidewalk and driveway (6” thick) installed and accepted. The ContractUnit Price shall include compensation for all labor, material, and equipment required to install the concrete sidewalk or driveway in accordance with the plans and specifications.	SY	160.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	160.0000	SY	126.000	0.00
Weekley Asphalt Paving, Inc.	160.0000	SY	73.030	0.00
Sagaris Corp	160.0000	SY	125.000	0.00
Florida Blacktop, Inc.	160.0000	SY	123.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: DETECTABLE WARN-	Payment for this item shall be made at the Contractor's Unit Price per square foot of detectable warning installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the detectable warning in accordance with the plans and specifications.	SF	66.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	66.0000	SF	50.000	0.00
Weekley Asphalt Paving, Inc.	66.0000	SF	43.000	0.00
Sagaris Corp	66.0000	SF	30.000	0.00
Florida Blacktop, Inc.	66.0000	SF	64.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: PERFORMANCE TUR-	Payment for this item shall be made on a square yard basis. The Contractor's unit price shall include full compensation for all sodding within the road right of way as indicated on the plans. The Contractor's unit price shall constitute full compensation for all labor, materials, and equipment required for excavation, grading, hauling, placing, compacting, and dressing of the surface of the swales in preparation for sodding, placement, and establishment. Any sod that is damaged incidental to construction or defective shall be replaced at the Contractor’s expense. Includes 2” of independent topsoil.	SY	36.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	36.0000	SY	20.000	0.00
Weekley Asphalt Paving, Inc.	36.0000	SY	8.320	0.00
Sagaris Corp	36.0000	SY	10.000	0.00
Florida Blacktop, Inc.	36.0000	SY	11.500	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: UTILITY FIXTURE-	Payment for this item shall be made at the Contractor's Unit Price per each of meter box adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust meter boxes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	3,000.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	900.000	0.00
Sagaris Corp	2.0000	EA	400.000	0.00

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	2.0000	EA	1,436.080	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: MIDBLOCK CROSSW-	Payment for this item shall be made at the Contractor's Unit Price per sign assembly furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications. Payment shall be made for Single Post Sign Assembly installed by authorization of the Consultant. Any signs that are damaged incidental to construction shall be replaced at the Contractor's expense.	AS	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	AS	70,000.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	AS	19,600.000	0.00
Sagaris Corp	4.0000	AS	14,000.000	0.00
Florida Blacktop, Inc.	4.0000	AS	25,282.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: SINGLE POST SIG-	Payment for this item shall be made at the Contractor's Unit Price per each sign assembly furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications.	EA	6.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	6.0000	EA	2,500.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	6.0000	EA	575.000	0.00
Sagaris Corp	6.0000	EA	900.000	0.00
Florida Blacktop, Inc.	6.0000	EA	800.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: SINGLE POST SIG-	Payment for this item shall be made at the Contractor's Unit Price per each sign assembly relocated and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	600.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	195.000	0.00
Sagaris Corp	1.0000	EA	350.000	0.00
Florida Blacktop, Inc.	1.0000	EA	590.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: SINGLE POST SIG-	Payment for this item shall be made at the Contractor’s Unit Price per each sign assembly removed. The Contractor's unit price shall include full compensation for all removing and disposing of existing sign panels, posts and ground attachments, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material and removal of all extraneous materials in accordance with the plans and specifications.	EA	5.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	5.0000	EA	1,000.000	0.00
Weekley Asphalt Paving, Inc.	5.0000	EA	25.000	0.00
Sagaris Corp	5.0000	EA	85.000	0.00
Florida Blacktop, Inc.	5.0000	EA	215.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: OBJECT MARKER,-	Payment for this item shall be made at the Contractor's Unit Price per each object marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the object markers in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	2,000.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	370.000	0.00
Sagaris Corp	2.0000	EA	350.000	0.00
Florida Blacktop, Inc.	2.0000	EA	360.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: RAISED PAVEMENT-	Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	71.0000

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	71.0000	EA	80.000	0.00
Weekley Asphalt Paving, Inc.	71.0000	EA	4.450	0.00
Sagaris Corp	71.0000	EA	15.000	0.00
Florida Blacktop, Inc.	71.0000	EA	16.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: RAISED PAVEMENT-	Payment shall be made for each Raised Pavement Marker installed by authorization of the Consultant. Any Raised Pavement Marker that are damaged incidental to construction shall be replaced at the Contractor's expense. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	13.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	13.0000	EA	700.000	0.00
Weekley Asphalt Paving, Inc.	13.0000	EA	10.000	0.00
Sagaris Corp	13.0000	EA	450.000	0.00
Florida Blacktop, Inc.	13.0000	EA	592.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: PAINTED PAVEMEN-	Payment for this item shall be made at the Contractor's Unit Price per square foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications. Payment shall be made for each square foot of Painted Pavement Markings, Standard, Yellow Island Nose installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.	SF	23.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	23.0000	SF	50.000	0.00
Weekley Asphalt Paving, Inc.	23.0000	SF	1.400	0.00
Sagaris Corp	23.0000	SF	85.000	0.00
Florida Blacktop, Inc.	23.0000	SF	2.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: PAINTED PAVEMEN-	Payment for this item shall be made on a Lump Sum Basis. The Contractor's unit price shall include full compensation for the painted pavement markings including, striping, messages, symbols, arrows or other similar pavement markings in accordance with the specifications.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	30,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	4,930.000	0.00
Sagaris Corp	1.0000	LS	6,080.000	0.00
Florida Blacktop, Inc.	1.0000	LS	3,531.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1:THERMOPLASTIC, S-	711-11123 – Thermoplastic, Standard, White, Solid, 12” for Crosswalk and Roundabout: Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	124.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	124.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	124.0000	LF	2.400	0.00
Sagaris Corp	124.0000	LF	3.500	0.00
Florida Blacktop, Inc.	124.0000	LF	3.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	1,400.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	306.000	0.00
Sagaris Corp	2.0000	EA	205.000	0.00
Florida Blacktop, Inc.	2.0000	EA	93.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	269.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	269.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	269.0000	LF	1.400	0.00
Sagaris Corp	269.0000	LF	3.500	0.00
Florida Blacktop, Inc.	269.0000	LF	1.750	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	WHITE, YIELD LINE: Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	30.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	30.0000	LF	40.000	0.00
Weekley Asphalt Paving, Inc.	30.0000	LF	6.110	0.00
Sagaris Corp	30.0000	LF	85.000	0.00
Florida Blacktop, Inc.	30.0000	LF	50.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	YELLOW, SOLID, 18” FOR DIAGONAL OR CHEVRON: Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	36.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	36.0000	LF	50.000	0.00
Weekley Asphalt Paving, Inc.	36.0000	LF	3.700	0.00
Sagaris Corp	36.0000	LF	7.000	0.00
Florida Blacktop, Inc.	36.0000	LF	5.400	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: YELLOW, SOLID,-	STANDARD YELLOW, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	148.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	148.0000	LF	30.000	0.00
Weekley Asphalt Paving, Inc.	148.0000	LF	3.700	0.00
Sagaris Corp	148.0000	LF	10.000	0.00
Florida Blacktop, Inc.	148.0000	LF	5.400	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK: Payment shall be made for each linear foot of Thermoplastic, Preformed, Pavement Striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.	LF	100.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	100.0000	LF	30.000	0.00
Weekley Asphalt Paving, Inc.	100.0000	LF	4.650	0.00
Sagaris Corp	100.0000	LF	25.000	0.00
Florida Blacktop, Inc.	100.0000	LF	36.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE: Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in ccordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,500.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	500.000	0.00
Sagaris Corp	1.0000	EA	350.000	0.00
Florida Blacktop, Inc.	1.0000	EA	395.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, ARROW: Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,500.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	500.000	0.00
Sagaris Corp	1.0000	EA	175.000	0.00
Florida Blacktop, Inc.	1.0000	EA	215.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, WHITE, SOLID 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	570.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	570.0000	LF	12.000	0.00
Weekley Asphalt Paving, Inc.	570.0000	LF	1.400	0.00
Sagaris Corp	570.0000	LF	1.650	0.00
Florida Blacktop, Inc.	570.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, YELLOW, SOLID 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	576.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	576.0000	LF	12.000	0.00
Weekley Asphalt Paving, Inc.	576.0000	LF	1.400	0.00
Sagaris Corp	576.0000	LF	1.650	0.00
Florida Blacktop, Inc.	576.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 1: GREEN-COLORED P-	Payment for this item shall be made at the Contractor's Unit Price per square foot of green colored pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the green colored pavement in accordance with the plans and specifications.	SF	80.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	80.0000	SF	32.000	0.00
Weekley Asphalt Paving, Inc.	80.0000	SF	20.500	0.00
Sagaris Corp	80.0000	SF	20.000	0.00
Florida Blacktop, Inc.	80.0000	SF	21.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: MOBILIZATION & D-	The lump sum price for this item shall be full compensation for mobilization and demobilization activities. This includes, but is not limited to, Performance and Payment Guarantee and Insurance, scheduling, project coordination, labor associated with permit acquisition (excluding those permits detailed and paid for under other bid items), temporary facilities, staging areas, site access, field offices, distribution of flyers to the affected residents and businesses, project signs, finish grading, site cleanup, and all other activities necessary to prepare and complete the contract work. Partial payments for mobilization and demobilization shall be made in accordance with Specification Section 01025.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	25,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	13,400.000	0.00
Sagaris Corp	1.0000	LS	10,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	7,000.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: MAINTENANCE OF T-	The lump sum price for this item shall be full compensation for all labor, equipment, material, and work required for maintenance of traffic in accordance with FDOT Standards and/or Broward County and/or the CITY of Fort Lauderdale. This item includes, but is not limited to, preparation and submittal of maintenance of traffic plans (MOTs), addressing comments regarding MOTs from agencies with jurisdiction, providing personnel as required to direct traffic (flaggers, crossing guards, local police, etc.), all temporary signage and striping, message boards, barricades, temporary barrier walls, drums, cones, providing signs, lights, installing temporary fencing and walkways as required to maintain pedestrian traffic, installing temporary steel plates for vehicular traffic and all other work incidental to the maintenance of traffic as required by FDOT Standards and/or Broward County and/or the requirements of the CITY of Fort Lauderdale and the Contract Documents. Payment for Maintenance of Traffic shall not exceed 3% of the sum of Bid Item Nos. 6 through 38 and will be made in equal monthly amounts during the duration of the Contract Time.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	40,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	13,062.000	0.00
Sagaris Corp	1.0000	LS	6,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	120,000.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: SEDIMENT BARRIE-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of sediment barrier installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the sediment barrier in accordance with the plans and specifications.	LF	186.0000

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	186.0000	LF	12.000	0.00
Weekley Asphalt Paving, Inc.	186.0000	LF	2.500	0.00
Sagaris Corp	186.0000	LF	10.000	0.00
Florida Blacktop, Inc.	186.0000	LF	5.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: CLEARING & GRUB-	Payment for this item shall be made on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for all excavation necessary within theroad right of way including debris removal, grading, and any other required clearing and grubbing in accordance with the plans and specifications, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.	AC	0.0100

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	0.0100	AC	60,000.000	0.00
Weekley Asphalt Paving, Inc.	0.0100	AC	500,000.000	0.00
Sagaris Corp	0.0100	AC	10,000.000	0.00
Florida Blacktop, Inc.	0.0100	AC	478,760.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: REMOVAL OF EXIS-	Payment for this item shall be made at the Contractor’s Unit Price per square yard of material excavated. The Contractor's unit price shall include full compensation for all removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material, Trench Safety Compliance and removal of all extraneous excavated materials in accordance with the plans and specifications.	SY	53.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	53.0000	SY	27.000	0.00
Weekley Asphalt Paving, Inc.	53.0000	SY	51.420	0.00
Sagaris Corp	53.0000	SY	10.000	0.00
Florida Blacktop, Inc.	53.0000	SY	70.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: MILLING EXIST A-	Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 1” removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 1” asphaltic concrete in accordance with the plans and specifications.	SY	298.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	298.0000	SY	5.000	0.00
Weekley Asphalt Paving, Inc.	298.0000	SY	30.000	0.00
Sagaris Corp	298.0000	SY	15.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	298.0000	SY	28.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: MILLING EXIST A-	Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 2.5” removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 2.5” asphaltic concrete in accordance with the plans and specifications.	SY	59.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	59.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	59.0000	SY	30.000	0.00
Sagaris Corp	59.0000	SY	20.000	0.00
Florida Blacktop, Inc.	59.0000	SY	190.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 2: SUPERPAVE ASPHA-	Payment for this item shall be made at the Contractor's Unit Price per ton of Superpave Asphaltic Concrete installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Superpave Asphaltic Concrete in accordance with the plans and specifications.	TN	87.7000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	87.7000	TN	350.000	0.00
Weekley Asphalt Paving, Inc.	87.7000	TN	300.000	0.00
Sagaris Corp	87.7000	TN	270.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	87.7000	TN	440.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: MANHOLE, ADJUST-	Payment for this item shall be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	750.000	0.00
Sagaris Corp	1.0000	EA	1,500.000	0.00
Florida Blacktop, Inc.	1.0000	EA	2,155.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: VALVE BOXES, AD-	Payment for this item shall be made at the Contractor's Unit Price per each of valve adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust valves shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	3.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	3.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	3.0000	EA	600.000	0.00
Sagaris Corp	3.0000	EA	350.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	3.0000	EA	1,436.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: METER BOXES, AD-	Payment for this item shall be made at the Contractor's Unit Price per each of meter box adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust meter boxes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	750.000	0.00
Sagaris Corp	1.0000	EA	350.000	0.00
Florida Blacktop, Inc.	1.0000	EA	1,436.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: CONCRETE CURB A-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of concrete curb installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the concrete curb complete in place in accordance with the plans and specifications.	LF	124.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	124.0000	LF	50.000	0.00
Weekley Asphalt Paving, Inc.	124.0000	LF	73.870	0.00
Sagaris Corp	124.0000	LF	50.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	124.0000	LF	71.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: CONCRETE SIDEWA-	Payment for this item shall be made at the Contractor's Unit Price per square yard of concrete sidewalk and driveway (6” thick) installed and accepted. The ContractUnit Price shall include compensation for all labor, material, and equipment required to install the concrete sidewalk or driveway in accordance with the plans and specifications.	SY	59.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	59.0000	SY	126.000	0.00
Weekley Asphalt Paving, Inc.	59.0000	SY	73.030	0.00
Sagaris Corp	59.0000	SY	125.000	0.00
Florida Blacktop, Inc.	59.0000	SY	123.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: PATTERNED PAVEM-	Payment for this item shall be made at the Contractor's Unit Price per square yard of patterned pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, equipment or any other items required to install the patterned pavement in ccordance with the plans and specifications. Payment shall be made for Patterned Pavement, Vehicular Areas constructed or replaced by authorization of the Consultant. Any patterned pavement that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.	SY	139.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	139.0000	SY	280.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	139.0000	SY	144.210	0.00
Sagaris Corp	139.0000	SY	140.000	0.00
Florida Blacktop, Inc.	139.0000	SY	155.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: PERFORMANCE TUR-	Payment for this item shall be made on a square yard basis. The Contractor's unit price shall include full compensation for all sodding within the road right of way as indicated on the plans. The Contractor's unit price shall constitute full compensation for all labor, materials, and equipment required for excavation, grading, hauling, placing, compacting, and dressing of the surface of the swales in preparation for sodding, placement, and establishment. Any sod that is damaged incidental to construction or defective shall be replaced at the Contractor’s expense. Includes 2” of independent topsoil.	SY	28.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	28.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	28.0000	SY	8.320	0.00
Sagaris Corp	28.0000	SY	10.000	0.00
Florida Blacktop, Inc.	28.0000	SY	11.500	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: SINGLE POST SIG-	Payment for this item shall be made at the Contractor's Unit Price per each sign assembly furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	2,500.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	4.450	0.00
Sagaris Corp	4.0000	EA	850.000	0.00
Florida Blacktop, Inc.	4.0000	EA	800.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: SINGLE POST SIG-	Payment for this item shall be made at the Contractor's Unit Price per each sign assembly relocated and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.	EA	3.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	3.0000	EA	1,100.000	0.00
Weekley Asphalt Paving, Inc.	3.0000	EA	275.000	0.00
Sagaris Corp	3.0000	EA	140.000	0.00
Florida Blacktop, Inc.	3.0000	EA	590.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: RAISED PAVEMENT-	Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	80.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	4.0000	EA	10.000	0.00
Sagaris Corp	4.0000	EA	15.000	0.00
Florida Blacktop, Inc.	4.0000	EA	16.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: RAISED PAVEMENT-	Payment shall be made for each Raised Pavement Marker installed by authorization of the Consultant. Any Raised Pavement Marker that are damaged incidental to construction shall be replaced at the Contractor's expense. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	700.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	440.000	0.00
Sagaris Corp	4.0000	EA	450.000	0.00
Florida Blacktop, Inc.	4.0000	EA	1,189.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: PAINTED PAVEMEN-	Payment for this item shall be made on a Lump Sum Basis. The Contractor's unit price shall include full compensation for the painted pavement markings including, striping, messages, symbols, arrows or other similar pavement markings in accordance with the specifications.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	30,000.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	1.0000	LS	1,880.000	0.00
Sagaris Corp	1.0000	LS	1,700.000	0.00
Florida Blacktop, Inc.	1.0000	LS	974.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	711-11125 – Thermoplastic, Standard, White, Solid, 24” for Stop Line and Crosswalk: Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	8.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	8.0000	LF	40.000	0.00
Weekley Asphalt Paving, Inc.	8.0000	LF	4.650	0.00
Sagaris Corp	8.0000	LF	25.000	0.00
Florida Blacktop, Inc.	8.0000	LF	8.250	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	3.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	3.0000	EA	1,400.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	3.0000	EA	306.000	0.00
Sagaris Corp	3.0000	EA	150.000	0.00
Florida Blacktop, Inc.	3.0000	EA	93.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	16.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	16.0000	LF	40.000	0.00
Weekley Asphalt Paving, Inc.	16.0000	LF	1.400	0.00
Sagaris Corp	16.0000	LF	3.500	0.00
Florida Blacktop, Inc.	16.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE: Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in ccordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	2,000.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	2.0000	EA	500.000	0.00
Sagaris Corp	2.0000	EA	350.000	0.00
Florida Blacktop, Inc.	2.0000	EA	395.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, ARROW: Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	2,000.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	500.000	0.00
Sagaris Corp	2.0000	EA	175.000	0.00
Florida Blacktop, Inc.	2.0000	EA	215.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, WHITE, SOLID 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	190.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	190.0000	LF	10.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	190.0000	LF	1.400	0.00
Sagaris Corp	190.0000	LF	1.650	0.00
Florida Blacktop, Inc.	190.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, YELLOW, SOLID 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	160.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	160.0000	LF	10.000	0.00
Weekley Asphalt Paving, Inc.	160.0000	LF	1.400	0.00
Sagaris Corp	160.0000	LF	1.650	0.00
Florida Blacktop, Inc.	160.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 2: GREEN-COLORED P-	Payment for this item shall be made at the Contractor's Unit Price per square foot of green colored pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the green colored pavement in accordance with the plans and specifications.	SF	160.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	160.0000	SF	32.000	0.00

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Weekley Asphalt Paving, Inc.	160.0000	SF	20.600	0.00
Sagaris Corp	160.0000	SF	20.000	0.00
Florida Blacktop, Inc.	160.0000	SF	21.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: MOBILIZATION & D-	The lump sum price for this item shall be full compensation for mobilization and demobilization activities. This includes, but is not limited to, Performance and Payment Guarantee and Insurance, scheduling, project coordination, labor associated with permit acquisition (excluding those permits detailed and paid for under other bid items), temporary facilities, staging areas, site access, field offices, distribution of flyers to the affected residents and businesses, project signs, finish grading, site cleanup, and all other activities necessary to prepare and complete the contract work. Partial payments for mobilization and demobilization shall be made in accordance with Specification Section 01025.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	25,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	13,400.000	0.00
Sagaris Corp	1.0000	LS	13,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	7,000.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: MAINTENANCE OF T-	The lump sum price for this item shall be full compensation for all labor, equipment, material, and work required for maintenance of traffic in accordance with FDOT Standards and/or Broward County and/or the CITY of Fort Lauderdale. This item includes, but is not limited to, preparation and submittal of maintenance of traffic plans (MOTs), addressing comments regarding MOTs from agencies with jurisdiction, providing personnel as required to direct traffic (flaggers, crossing guards, local police, etc.), all temporary signage and striping, message boards, barricades, temporary barrier walls, drums, cones, providing signs, lights, installing temporary fencing and walkways as required to maintain pedestrian traffic, installing temporary steel plates for vehicular traffic and all other work incidental to the maintenance of traffic as required by FDOT Standards and/or Broward County and/or the requirements of the CITY of Fort Lauderdale and the Contract Documents. Payment for Maintenance of Traffic shall not exceed 3% of the sum of Bid Item Nos. 6 through 38 and will be made in equal monthly amounts during the duration of the Contract Time.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	40,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	13,695.000	0.00
Sagaris Corp	1.0000	LS	6,000.000	0.00
Florida Blacktop, Inc.	1.0000	LS	32,000.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: SEDIMENT BARRIE-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of sediment barrier installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the sediment barrier in accordance with the plans and specifications.	LF	161.0000

continued...

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	161.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	161.0000	LF	2.500	0.00
Sagaris Corp	161.0000	LF	5.000	0.00
Florida Blacktop, Inc.	161.0000	LF	5.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: INLET PROTECTIO-	Payment for this item shall be made at the Contractor's Unit Price per each of inlet protection installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the inlet protection system in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	2,500.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	155.000	0.00
Sagaris Corp	1.0000	EA	250.000	0.00
Florida Blacktop, Inc.	1.0000	EA	260.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: CLEARING & GRUB-	Payment for this item shall be made on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for all excavation necessary within theroad right of way including debris removal, grading, and any other required clearing and grubbing in accordance with the plans and specifications, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.	AC	0.0300

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	0.0300	AC	90,000.000	0.00
Weekley Asphalt Paving, Inc.	0.0300	AC	334,200.000	0.00
Sagaris Corp	0.0300	AC	10,000.000	0.00
Florida Blacktop, Inc.	0.0300	AC	181,760.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: REMOVAL OF EXIS-	Payment for this item shall be made at the Contractor’s Unit Price per square yard of material excavated. The Contractor's unit price shall include full compensation for all removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material, Trench Safety Compliance and removal of all extraneous excavated materials in accordance with the plans and specifications.	SY	72.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	72.0000	SY	30.000	0.00
Weekley Asphalt Paving, Inc.	72.0000	SY	51.420	0.00
Sagaris Corp	72.0000	SY	20.000	0.00
Florida Blacktop, Inc.	72.0000	SY	70.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: MILLING EXIST A-	Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 1” removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 1” asphaltic concrete in accordance with the plans and specifications.	SY	680.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	680.0000	SY	5.000	0.00
Weekley Asphalt Paving, Inc.	680.0000	SY	30.000	0.00
Sagaris Corp	680.0000	SY	10.000	0.00
Florida Blacktop, Inc.	680.0000	SY	13.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: MILLING EXIST A-	Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 2.5” removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 2.5” asphaltic concrete in accordance with the plans and specifications.	SY	83.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	83.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	83.0000	SY	30.000	0.00
Sagaris Corp	83.0000	SY	15.000	0.00
Florida Blacktop, Inc.	83.0000	SY	136.000	0.00

Item	Description	Unit of Measure	Quantity
ALTENATE BID 3: SUPERPAVE ASPHA-	Payment for this item shall be made at the Contractor's Unit Price per ton of Superpave Asphaltic Concrete installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Superpave Asphaltic Concrete in accordance with the plans and specifications.	TN	180.5000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	180.5000	TN	350.000	0.00
Weekley Asphalt Paving, Inc.	180.5000	TN	300.000	0.00
Sagaris Corp	180.5000	TN	260.000	0.00
Florida Blacktop, Inc.	180.5000	TN	334.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: INLETS, DT BOT,-	Payment for this item shall be made at the Contractor's Unit Price per each inlet, manhole, or junction structure installed and accepted. The Contract Unit Price shall include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, pollution retardant baffles, grout, brick, shoring, trenching, equipment or any other items required to install the inlets, manholes, or junction structure complete in place in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	11,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	12,000.000	0.00
Sagaris Corp	1.0000	EA	5,000.000	0.00
Florida Blacktop, Inc.	1.0000	EA	10,770.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: MANHOLE, ADJUST-	Payment for this item shall be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	750.000	0.00
Sagaris Corp	2.0000	EA	1,500.000	0.00
Florida Blacktop, Inc.	2.0000	EA	2,155.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: VALVE BOXES, AD-	Payment for this item shall be made at the Contractor's Unit Price per each of valve adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust valves shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	1,200.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	600.000	0.00
Sagaris Corp	4.0000	EA	350.000	0.00
Florida Blacktop, Inc.	4.0000	EA	1,436.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: PIPE CULVERT, O-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of pipe installed and accepted. The Contract Unit Price shall include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, grout, brick, shoring, trenching, equipment or any other items required to install the pipe complete in place in accordance with the plans and specifications.	LF	15.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	15.0000	LF	200.000	0.00
Weekley Asphalt Paving, Inc.	15.0000	LF	450.000	0.00
Sagaris Corp	15.0000	LF	150.000	0.00
Florida Blacktop, Inc.	15.0000	LF	574.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: CONCRETE CURB A-	Payment for this item shall be made at the Contractor's Unit Price per linear foot of concrete curb installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the concrete curb complete in place in accordance with the plans and specifications.	LF	179.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	179.0000	LF	150.000	0.00
Weekley Asphalt Paving, Inc.	179.0000	LF	73.870	0.00
Sagaris Corp	179.0000	LF	50.000	0.00
Florida Blacktop, Inc.	179.0000	LF	72.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: CONCRETE SIDEWA-	Payment for this item shall be made at the Contractor's Unit Price per square yard of concrete sidewalk and driveway (6” thick) installed and accepted. The ContractUnit Price shall include compensation for all labor, material, and equipment required to install the concrete sidewalk or driveway in accordance with the plans and specifications.	SY	67.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	67.0000	SY	180.000	0.00
Weekley Asphalt Paving, Inc.	67.0000	SY	73.030	0.00
Sagaris Corp	67.0000	SY	140.000	0.00
Florida Blacktop, Inc.	67.0000	SY	123.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: PATTERNED PAVEM-	Payment for this item shall be made at the Contractor's Unit Price per square yard of patterned pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, equipment or any other items required to install the patterned pavement in ccordance with the plans and specifications. Payment shall be made for Patterned Pavement, Vehicular Areas constructed or replaced by authorization of the Consultant. Any patterned pavement that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.	SY	211.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	211.0000	SY	280.000	0.00
Weekley Asphalt Paving, Inc.	211.0000	SY	144.210	0.00
Sagaris Corp	211.0000	SY	140.000	0.00
Florida Blacktop, Inc.	211.0000	SY	155.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: DETECTABLE WARN-	Payment for this item shall be made at the Contractor's Unit Price per square foot of detectable warning installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the detectable warning in accordance with the plans and specifications.	SF	25.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	25.0000	SF	50.000	0.00
Weekley Asphalt Paving, Inc.	25.0000	SF	43.000	0.00
Sagaris Corp	25.0000	SF	30.000	0.00
Florida Blacktop, Inc.	25.0000	SF	64.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: PERFORMANCE TUR-	Payment for this item shall be made on a square yard basis. The Contractor's unit price shall include full compensation for all sodding within the road right of way as indicated on the plans. The Contractor's unit price shall constitute full compensation for all labor, materials, and equipment required for excavation, grading, hauling, placing, compacting, and dressing of the surface of the swales in preparation for sodding, placement, and establishment. Any sod that is damaged incidental to construction or defective shall be replaced at the Contractor’s expense. Includes 2” of independent topsoil.	SY	116.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	116.0000	SY	10.000	0.00
Weekley Asphalt Paving, Inc.	116.0000	SY	8.320	0.00
Sagaris Corp	116.0000	SY	10.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	116.0000	SY	11.500	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: SINGLE POST SIG-	Payment for this item shall be made at the Contractor's Unit Price per each sign assembly furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	2,500.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	575.000	0.00
Sagaris Corp	4.0000	EA	850.000	0.00
Florida Blacktop, Inc.	4.0000	EA	800.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: ENHANCED HIGHWA-	Payment for this item shall be made at the Contractor's Unit Price per each sign assembly relocated and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.	EA	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	EA	15,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	EA	13,645.000	0.00
Sagaris Corp	1.0000	EA	5,000.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	1.0000	EA	33,326.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: RAISED PAVEMENT-	Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	10.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	10.0000	EA	80.000	0.00
Weekley Asphalt Paving, Inc.	10.0000	EA	4.000	0.00
Sagaris Corp	10.0000	EA	15.000	0.00
Florida Blacktop, Inc.	10.0000	EA	16.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: RAISED PAVEMENT-	Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	80.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	4.000	0.00
Sagaris Corp	2.0000	EA	15.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	2.0000	EA	16.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: RAISED PAVEMENT-	Payment shall be made for each Raised Pavement Marker installed by authorization of the Consultant. Any Raised Pavement Marker that are damaged incidental to construction shall be replaced at the Contractor's expense. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	700.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	440.000	0.00
Sagaris Corp	4.0000	EA	430.000	0.00
Florida Blacktop, Inc.	4.0000	EA	1,189.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: PAINTED PAVEMEN-	Payment for this item shall be made on a Lump Sum Basis. The Contractor's unit price shall include full compensation for the painted pavement markings including, striping, messages, symbols, arrows or other similar pavement markings in accordance with the specifications.	LS	1.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	1.0000	LS	30,000.000	0.00
Weekley Asphalt Paving, Inc.	1.0000	LS	1,890.000	0.00
Sagaris Corp	1.0000	LS	2,000.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	1.0000	LS	2,736.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	711-11125 – Thermoplastic, Standard, White, Solid, 24” for Stop Line and Crosswalk: Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	22.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	22.0000	LF	60.000	0.00
Weekley Asphalt Paving, Inc.	22.0000	LF	5.000	0.00
Sagaris Corp	22.0000	LF	7.500	0.00
Florida Blacktop, Inc.	22.0000	LF	8.250	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	4.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	4.0000	EA	1,400.000	0.00
Weekley Asphalt Paving, Inc.	4.0000	EA	306.000	0.00
Sagaris Corp	4.0000	EA	150.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	4.0000	EA	93.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	16.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	16.0000	LF	40.000	0.00
Weekley Asphalt Paving, Inc.	16.0000	LF	1.500	0.00
Sagaris Corp	16.0000	LF	3.500	0.00
Florida Blacktop, Inc.	16.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE: Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in ccordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	500.000	0.00
Sagaris Corp	2.0000	EA	350.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	2.0000	EA	395.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	THERMOPLASTIC, PREFORMED, WHITE, ARROW: Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.	EA	2.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	2.0000	EA	1,800.000	0.00
Weekley Asphalt Paving, Inc.	2.0000	EA	500.000	0.00
Sagaris Corp	2.0000	EA	175.000	0.00
Florida Blacktop, Inc.	2.0000	EA	215.000	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, WHITE, SOLID 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	74.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	74.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	74.0000	LF	1.400	0.00
Sagaris Corp	74.0000	LF	1.650	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	74.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: THERMOPLASTIC,-	THERMOPLASTIC, STANDARD – OTHER SURFACES, YELLOW, SOLID 6”: Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.	LF	238.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	238.0000	LF	20.000	0.00
Weekley Asphalt Paving, Inc.	238.0000	LF	1.400	0.00
Sagaris Corp	238.0000	LF	1.650	0.00
Florida Blacktop, Inc.	238.0000	LF	1.600	0.00

Item	Description	Unit of Measure	Quantity
ALTERNATE BID 3: GREEN-COLORED P-	Payment for this item shall be made at the Contractor's Unit Price per square foot of green colored pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the green colored pavement in accordance with the plans and specifications.	SF	160.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	160.0000	SF	32.000	0.00
Weekley Asphalt Paving, Inc.	160.0000	SF	20.600	0.00
Sagaris Corp	160.0000	SF	20.000	0.00

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Florida Blacktop, Inc.	160.0000	SF	21.000	0.00

Item	Description	Unit of Measure	Quantity
YELLOW TYPE B RAISED PAVEMENT MA-	Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications. This line is part of the base bid.	EA	20.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Team Contracting, Inc.	20.0000	EA	40.000	0.00
Weekley Asphalt Paving, Inc.	20.0000	EA	8.000	0.00
Sagaris Corp	20.0000	EA	15.000	0.00
Florida Blacktop, Inc.	20.0000	EA	16.000	0.00

Header Questions And Responses

QUESTION

Have you completed the required forms?

Question Responses

Supplier	Name	Answer
75	Team Contracting, Inc.	Yes
227	Weekley Asphalt Paving, Inc.	Yes
1405	Sagaris Corp	Yes
1790	Florida Blacktop, Inc.	Yes

QUESTION

Anti-Human Trafficking Affidavit -not required at time of proposal, required during contract execution with the awarded Proposer.

Question Responses

Supplier	Name	Answer
75	Team Contracting, Inc.	Yes
227	Weekley Asphalt Paving, Inc.	Yes
1405	Sagaris Corp	Yes
1790	Florida Blacktop, Inc.	Yes

QUESTION

Insurance Requirements: Do you meet the insurance requirements? Please upload supporting documentations.

Question Responses

Supplier	Name	Answer
75	Team Contracting, Inc.	Yes
227	Weekley Asphalt Paving, Inc.	Yes
1405	Sagaris Corp	Yes
1790	Florida Blacktop, Inc.	Yes

QUESTION

Bid Security: Are you aware that this solicitation has a Bid Security requirement?

Question Responses

Supplier	Name	Answer
75	Team Contracting, Inc.	Yes
227	Weekley Asphalt Paving, Inc.	Yes
1405	Sagaris Corp	Yes
1790	Florida Blacktop, Inc.	Yes

QUESTION
Do you meet the experience requirements? The contractor shall have at least five (5) years previous construction experience in roadway construction including landscape, sidewalks, drainage and other related activities in the State of Florida

Contacts

Name	Email
INESSA RUBIN	irubin@fortlauderdale.gov

Q And A

Supplier	Question	Answer
Florida Blacktop, Inc.	What is the Engineer's estimate?	Engineer's estimate is $648,000.

DRAWING INDEX

SHEET NO:	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES
3	PROJECT LAYOUT
4-6	GENERAL NOTES
7-14	ROADWAY PLAN
15-22	INTERSECTION DETAIL
23-24	ROADWAY DETAILS
25-33	SIGNING AND PAVEMENT MARKING PLAN
34-38	SIGNING AND PAVEMENT MARKING DETAILS

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

K:\WPB_Design\04318430 4\roadway\KEYSRD01.dgn 3:58:00 PM 3/4/2025 max.teddy

BCHCED REF#230914001

CITY OF FORT LAUDERDALE

CITY PROJECT NO. 12598

RIVERLAND ROAD TRAFFIC CALMING IMPROVEMENTS

FORT LAUDERDALE, FLORIDA

ERIC REGUEIRO LICENSE No 86211 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

GOVERNING STANDARDS AND SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION, 2023-24 DESIGN STANDARDS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, FY 2023-24 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS AND CITY OF FORT LAUDERDALE BLUE BOOK DETAILS.

THE PUBLIC ROADWAY(S) INDICATED IN THESE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE LATEST "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONCTRUCTION AND MAINTENANCE FOR STREETS & HIGHWAYS - STATE OF FLORIDA."

BROWARD COUNTY MINIMUM STANDARDS APPLICABLE TO PUBLIC RIGHTS-OF-WAY UNDER BROWARD COUNTY JURISDICTION DATED APRIL 2018

FOR DESIGN STANDARDS CLICK ON THE "DESIGN STANDARDS" LINK AT THE FOLLOWING WEB SITE:
http://www.dot.state.fl.us/rddesign/

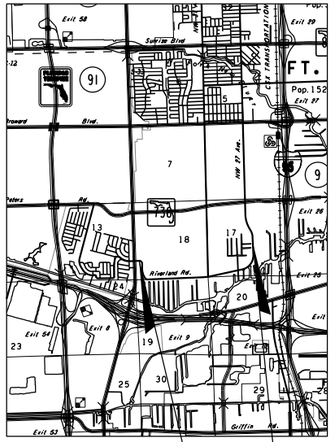
FOR THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION CLICK ON THE "SPECIFICATIONS" LINK AT THE FOLLOWING WEB SITE:
http://www.dot.state.fl.us/specificationsoffice/

KIMLEY-HORN AND ASSOCIATES, INC.
ERIC REGUEIRO, P.E.
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411

PLANS PREPARED BY:

KIMLEY-HORN AND ASSOCIATES, INC.
CONSULTING ENGINEERS AND PLANNERS
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
PHONE (561) 845-0665

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.



END PROJECT
STA 906+35.00
℄ CONST. RIVERLAND RD.

BEGIN PROJECT
STA 808+54.64
℄ CONST. RIVERLAND RD.

NORTH

LOCATION SKETCH

SECTION 18, TOWNSHIP 50S, RANGE 42E

PROJECT #12598
RIVERLAND ROAD
TRAFFIC CALMING
FORT LAUDERDALE, FLORIDA

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

FORT LAUDERDALE CITY COMMISSION

DEAN J. TRANTALIS	MAYOR
JOHN C. HERBST	COMMISSIONER - DISTRICT 1
STEVEN GLASSMAN	COMMISSIONER - DISTRICT 2
PAMELA BEASLEY-PITTMAN	COMMISSIONER - DISTRICT 3
WARREN STURMAN	COMMISSIONER - DISTRICT 4

ROADWAY PLANS
ENGINEER OF RECORD: ERIC REGUEIRO, P.E.

P.E. NO.: 86211

DATE: 08/2024

CAD FILE: KEYSRD01.DGN

DRAWING FILE No.:

100% SET CAM #25-0825
Exhibit 1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

ROADWAY

PAY ITEM	DESCRIPTION	UNIT	TORTUGAS LN, SW 35TH AVE, RIVERLANE TER, SW 27TH AVE	CUBE SMART SELF STORAGE & BIMINI LN /ANDROS LN	SW 21ST ST	SW 19TH ST
0101 1	MOBILIZATION	LS	1	1	1	1
0102 1	MAINTENANCE OF TRAFFIC	LS	1	1	1	1
0104 10 3	SEDIMENT BARRIER	LF	981	485	186	161
0104 18	INLET PROTECTION SYSTEM	EA	4	1	-	1
0110 1 1	CLEARING & GRUBBING	LS	0.15	0.03	0.01	0.03
0110 4 10	REMOVAL OF EXISTING CONCRETE	SY	421	131	53	72
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	2046	962	298	680
0327 70 8	MILLING EXIST ASPH PAVT, 2.5" AVG DEPTH	SY	251	43	59	83
0334 1 53	SUPERPAVE ASPHALTIC CONC, TRAFFIC C, PG76-22	TN	751.9	80.8	87.7	180.5
0425 1 361	INLETS, CURB, TYPE P-6, <10'	EA	1	-	-	-
0425 1 521	INLETS, DT BOT, TYPE C, <10'	EA	2	-	-	1
0425 1 551	INLETS, DT BOT, TYPE E, <10'	EA	1	-	-	-
0425 2 61	MANHOLES, P-8, <10'	EA	2	-	-	-
0425 5	MANHOLE, ADJUST	EA	4	1	1	2
0425 5 1	MANHOLE, ADJUST, UTILITIES	EA	-	-	-	-
0425 6	VALVE BOXES, ADJUST	EA	7	1	3	4
0425 6 1	METER BOXES, ADJUST	EA	3	-	1	-
0430 175 112	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 12" S/CD	LF	-	-	-	15
0430 175 118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" S/CD	LF	169	-	-	-
0430 175 124	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" S/CD	LF	8	-	-	-
0520 1 10	CONCRETE CURB & GUTTER, TYPE F	LF	780	343	124	179
0522 2	CONC SIDEWALK AND DRIVEWAYS, 6" THICK	SY	431	160	59	67
0523 3	PATTERNED PAVEMENT, VEHICULAR AREAS	SY	779	-	139	211
0527 2	DETECTABLE WARNINGS	SF	85	66	-	25
0570 1 2	PERFORMANCE TURF, SOD	SY	487	36	28	116
0635 2 11	PULL & SPLICE BOX, F&I, 13"X24" COVER SIZE	EA	2	-	-	-
1080 21500	UTILITY FIXTURE, METER BOX, ADJUST	EA	-	2	-	-

0101-1
THE COST OF THIS PAY ITEM SHALL NOT EXCEED 10% OF THE TOTAL PROJECT COST.
0102-1
INCLUDES ALL ITEMS AND COSTS NECESSARY TO MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND PROVIDE ALL TRAFFIC CONTROL NEEDS THROUGHOUT ALL PHASES OF THE PROJECT AND CONFORM TO THE LATEST FDOT SPECIFICATIONS, FDOT ROADWAY AND TRAFFIC DESIGN STANDARD PLANS INDICES DRAWINGS, AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THERE ARE NO OTHER SEPARATE PAY ITEMS FOR TRAFFIC CONTROL. THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS FOR TEMPORARY SIGNING AND PAVEMENT MARKINGS (THERMO-PLASTIC AND PAINT), WORK ZONE SIGNS, BUSINESS SIGNS, REFLECTIVE PAVEMENT MARKERS, TEMPORARY LANE SEPARATORS, TEMPORARY TRAFFIC DETECTION AND MAINTENANCE, BARRICADES, ARROW BOARDS, PORTABLE CHANGEABLE MESSAGE SIGNS, CONES, CROSSING GUARDS, OFF-DUTY POLICEMEN, FLAGMEN, FLAGS, TEMPORARY ASPHALT PAVEMENT, TEMPORARY BASE, TEMPORARY DRAINAGE SYSTEM, TEMPORARY SHORING, CLEANING AND MAINTENANCE OF EXISTING DRAINAGE SYSTEM, TEMPORARY BARRIERS, BARRIER WALLS, TEMPORARY BARRIER WALLS (INCLUDING RELOCATION), GUARDRAIL, RELOCATION OF GUARDRAIL, TEMPORARY CRASH CUSHIONS, MAINTENANCE OF TEMPORARY CRASH CUSHIONS, TEMPORARY SIDEWALKS, DETOURS, ADJACENT PROPERTY ACCESS, DRIVEWAY CONNECTIONS AND MAINTENANCE OF EXISTING AND TEMPORARY PAVEMENTS, BICYCLE PATHS, SIDEWALKS, MAINTENANCE OF SAFE ROUTES TO SCHOOLS, SCHOOL CROSSINGS, PEDESTRIAN LONGITUDINAL CHANNELIZING DEVICES, COMMERCIAL MATERIAL FOR DRIVEWAYS, ADJACENT PROPERTY ACCESS AND OBLITERATION OF PAVEMENT MARKINGS AS NEEDED. THE COST OF THIS PAY ITEM SHALL NOT EXCEED 10% OF THE TOTAL PROJECT COST.
0425-15XX
INCLUDES THE COST OF CONCRETE APRONS WHEN APRONS ARE CALLED FOR IN THE PLANS.
0520-1-10
INCLUDES THE COST OF CURB PAD
0522-2
INCLUDES THE COST OF CONSTRUCTION OF RAMPS AS INDICATED ON THE PLAN. TREES, TREE ROOTS, HEDGES, LIGHTS, IRRIGATION, ETC. ON PRIVATE PROPERTY ARE TO BE PROTECTED. ALL COSTS TO BE INCLUDED IN THE COST OF SIDEWALK.

ENGINEER:
ERIC FERGUIERO, P.E.
REG. No.86211
DATE:08/2024
ADD: 1800 NEWTA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SUMMARY OF QUANTITIES

SHEET NO. 2 | OF 38
TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\SUMQRD01.dgn
3/4/2025 3:58:02 PM
maxiteddy

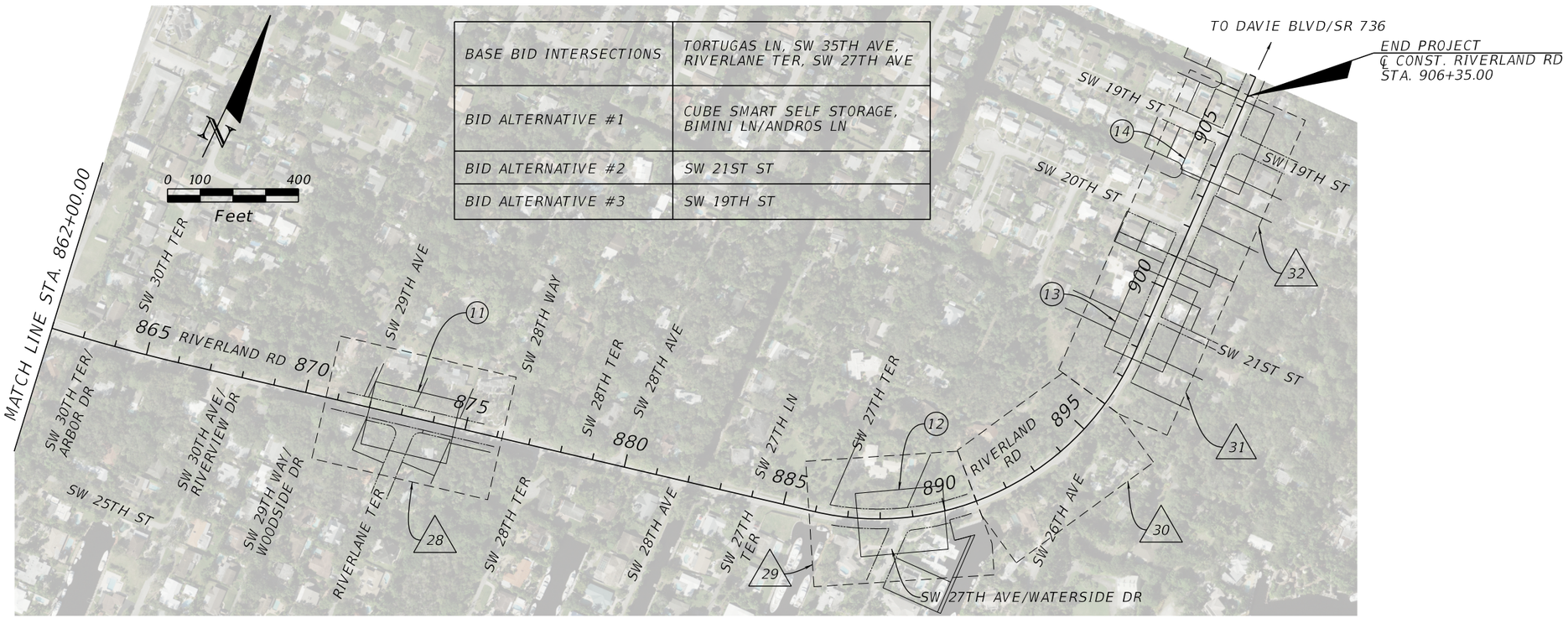
BCHCED REF#230914001

TO US-441/SR 7

BEGIN PROJECT
℄ CONST. RIVERLAND RD
STA. 808+54.64

SHEETS 7-14 - ROADWAY PLAN
15-22 - INTERSECTION DETAIL

SHEETS 24-32 - SIGNING & PAVEMENT MARKING PLAN



BASE BID INTERSECTIONS	TORTUGAS LN, SW 35TH AVE, RIVERLANE TER, SW 27TH AVE
BID ALTERNATIVE #1	CUBE SMART SELF STORAGE, BIMINI LN/ANDROS LN
BID ALTERNATIVE #2	SW 21ST ST
BID ALTERNATIVE #3	SW 19TH ST

ENGINEER:
ERIC FERGUERO, P.E.
REG. No.86211
DATE: 08/2024

ADD: 1800 NEWTOWN AVE, SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT
DESIGNED BY: MT
CHECKED BY: BK
DATE: 08/2024
SCALE: AS SHOWN
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

PROJECT #12598

PROJECT LAYOUT

SHEET NO.	OF
3	38

TOTAL: 38
CAD FILE:
CROSSING FILE NO.

K:\WPB_Design\04184304_Riverland Rd\04184304\roadway\PLAYRD01.dgn
3/4/2025 3:58:18 PM
max.teddy

GENERAL NOTES

1. ALL ELEVATIONS ARE REFERENCED FROM THE 1988 NAVD DATUM.

2. THE DESIGN SPEED AND POSTED SPEED OF RIVERLAND ROAD IS 30 MPH.

3. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED Vv, Vh, AND Vvh) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. UTILITIES SHALL REMAIN UNLESS OTHERWISE NOTED.

4. NOTIFY UTILITY OWNERS THROUGH SUNSHINE STATE ONE CALL OF FLORIDA (811) AND UTILITY OWNERS LISTED BELOW TWO BUSINESS DAYS (OR 10 DAYS IF DIGGING UNDER WATER) IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE.

UTILITY OWNERS:

COMPANY	CONTACT	TELEPHONE NUMBERS
AMERICAN TRAFFIC SOLUTIONS	SANTIAGO MARTINEZ	(480) 596-4595
ATT/DISTRIBUTION	HENRY URENA	(954) 260-0615
BROWARD COUNTY TRAFFIC ENGINEERING	ROBERT BLOUNT	(954) 847-2745
BROWARD COUNTY WATER & WASTEWATER SERVICES	GEORGE LOPEZ	(954) 859-1510
CENTURYLINK/LEVEL 3	FRANCISCO AZURI	(786) 266-1713
CITY OF FORT LAUDERDALE	AXEL RIVERA	(954) 828-5124
COMCAST	JUSTIN CASSELL	(786) 427-4049
FDOT / DISTRICT IV ITS / INTERSTATE FIBER	DAHLIA HIGHTOWER	(954) 847-2690
FDOT / DISTRICT IV ITS / ARTERIAL FIBER	ALEX GARCIA	(954) 847-1996
FIBERLIGHT, LLC. ATLANTIC BROADBAND/ BREEZELINE	JAVARES HALL	(305) 213-9908
FIBERNET DIRECT (CROWN CASTLE)	DANNY HASKETT	(786) 610-7073
FPL DISTRIBUTION	BYRON A. SAMPLE	(954) 401-4584
MCI / VERIZON	TODD MARS	(786) 236-8597
TECO PEOPLES GAS - SOUTH FLORIDA	MAX CHAMORRO	(954) 453-0812
VERRA MOBILITY	VICTORIA GRASSER	(480) 689-8989

5. USE HAND EXCAVATION METHODS WHEN EXCAVATING NEAR EXISTING UTILITIES OR WHERE HAND-DIGGING IS SPECIFIED ON THE PLANS. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK. USE EXTREME CAUTION WHEN EXCAVATING, INSTALLING, BACKFILLING, AND COMPACTING AROUND EXISTING UTILITES.

6. ANY DEWATERING WITHIN ONE MILE OF AN EPA SUPER FUND SITE OR A LANDFILL REQUIRES A GENERAL OR INDIVIDUAL WATER USE PERMIT FROM THE SFWMD. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE IF CONSTRUCTION LIES WITHIN THESE LIMITS AND TO ACQUIRE ALL NECESSARY PERMITS. THE LOCATION OF KNOWN EPA SUPER FUND SITES AND LANDFILLS NEAR THE PROJECT LIMITS ARE ACCESSIBLE FROM THE FOLLOWING SOURCES: ENVIRONMENTAL PROTECTION AGENCY, (703) 603-8797, http://www.epa.gov/enviro/cleanups/, WASTE & RECYCLING SERVICES OF BROWARD COUNTY. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

7. EROSION CONTROL ITEMS ARE INCLUDED FOR PREVENTION, CONTROL, AND ABATEMENT OF EROSION, SEDIMENTATION, AND WATER POLLUTION. USE THESE ITEMS AT THE LOCATIONS DESCRIBED IN THE APPROVED EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

8. ALL STATION AND OFFSETS ARE FROM THE ℄ CONSTRUCTION RIVERLAND RD. UNLESS OTHERWISE NOTED.

9. ADJUST ALL UTILITY LIDS AND COVERS, PULL BOXES, VALVE BOXES, AND MANHOLES TO FINISHED GRADE AS REQUIRED. COORDINATE WITH UTILITY OWNERS/AGENCIES FOR THE WORKS TO BE PERFORMED BY THE CONTRACTOR.

10. SAWCUT EXISTING SIDEWALK ONLY AT THE NEAREST FLAG POINTS.

11. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.

12. COORDINATE SELECTION AND REVIEW OF ANY PROPOSED STAGING AREAS ASSOCIATED WITH THIS PROJECT WITH THE CITY OF FORT LAUDERDALE.

13. PRIOR TO ORDERING, CASTING, OR PLACING PROPOSED DRAINAGE STRUCTURES, FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING DRAINAGE STRUCTURES AND PIPES TO WHICH THE PROPOSED DRAINAGE PIPES WILL BE CONNECTING, TO ACCOMMODATE FIELD CONDITIONS.

14. CONNECTIONS TO EXISTING PIPE SHALL MATCH EXISTING GRADE. FLOW LINE CALLOUTS IN THE PLANS WERE CALCULATED FROM AS-BUILT INFORMATION AND MAY NOT EXACTLY REPRESENT FIELD CONDITIONS. PROPOSED GRADES CONNECTING EXISTING PIPE ARE BEST AVAILABLE INFORMATION; THEREFORE, PRIOR TO LAYING PIPE, FIELD VERIFY AND/OR DETERMINE THE EXACT FLOW LINE OF EXISTING PIPE AT PROPOSED CONNECTION POINTS.

15. OFFSETS FOR MANHOLES ARE MEASURED TO CENTER OF STRUCTURE, OFFSETS FOR CURB INLETS ARE MEASURED TO THE EDGE OF PAVEMENT.

16. AS PART OF THE CONSTRUCTION PROJECT, CAP ANY PRIVATELY OWNED IRRIGATION SYSTEMS FOUND INSIDE COUNTY OR CITY RIGHT-OF-WAY WHERE THE SYSTEM IS IMPACTED BY CONSTRUCTION, AS DIRECTED BY THE ENGINEER. NOTIFY THE ADJACENT PROPERTY OWNERS AT LEAST 30 DAYS IN ADVANCE, WHERE THE IRRIGATION SYSTEMS ARE FOUND, TO ENSURE THE PROPERTY OWNER CAN RETRIVE ALL SAVAGEABLE MATERIAL PRIOR TO CONSTRUCTION. REPAIR, CONSTRUCT, OR REPLACE THE IRRIGATIONS SYSTEMS WITHIN COUNTY OR CITY RIGHT-OF-WAY THAT WERE CAPPED OR DAMAGED DURING CONSTRUCTION.

17. MAINTAIN/PROVIDE PROPERLY FUNCTIONING DRAINAGE SYSTEMS AT ALL TIMES DURING THE CONSTRUCTION PROCESS.

811 Know what's below. Call before you dig.

ENGINEER:
ERIC FEGUEIRO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 PENNA AVE. SUITE 200
POMPANO BEACH, FL 33411
TEL: 561-645-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY (CHK'D)	DESCRIPTION

PROJECT #12598

GENERAL NOTES

SHEET NO. 4 OF 38

TOTAL: 38

CAD FILE: GNNTRD01.DGN

ENGINEERING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\GNNTRD01.dgn 4:02:13 PM 3/4/2025 max.teddy

18. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED IN THE SIGNING & PAVEMENT MARKING PLANS.

19. IDENTIFY ANY UTILITY SERVICES TO ADJACENT PROPERTIES PRIOR TO ANY CONSTRUCTION ACTIVITIES THAT WILL IMPACT SERVICE.

20. BACKFILL MATERIAL SHOULD BE COMPACTED TO 100% OF MAXIMUM DENSITY PER AASHTO T-99-C.

21. ROOT BARRIER MUST BE INSTALLED AT LANDSCAPING AREAS ADJACENT TO THE SIDEWALK, PAVED AREAS, DRAINAGE STRUCTURES, AND PIPES. IN ADDITION, ROOT BARRIER SHALL EXTEND FOR AT LEAST 10' ON EACH SIDE OF THE PROPOSED TREES. COST TO BE INCLUDED IN PAY ITEM 0110-1-1 CLEARING AND GRUBBING.

TRAFFIC CONTROL NOTES

22. PROVIDE THE TRAFFIC CONTROL PLAN (TCP). THE CONTRACTOR'S ENGINEER OF RECORD SHALL SIGN AND SEAL THE TCP. IDENTIFY AND ASSESS ANY POTENTIAL IMPACTS TO A UTILITY THAT MAY BE CAUSED BY THE TCP AND NOTIFY THE CITY IN WRITING OF ANY SUCH POTENTIAL IMPACTS TO UTILITIES. SUBMIT THE TCP PLAN TO THE CITY AND OBTAIN THE CITY'S WRITTEN APPROVAL BEFORE BEGINNING WORK USING THE TCP. THE CITY'S WRITTEN APPROVAL IS REQUIRED FOR ALL MODIFICATIONS TO THE APPROVED TCP. THE CITY WILL ONLY ALLOW CHANGES TO THE APPROVED TCP IN AN EMERGENCY WITHOUT THE PROPER DOCUMENTATION.

23. THE TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND SUPPLEMENTS THERETO, AND THE CURRENT EDITION OF FLORIDA D.O.T. STANDARD PLANS INDEX 102-600 AS MINIMUM CRITERIA. KEEP ANY PROJECT AREAS THAT ARE NOT ACTIVE CONSTRUCTION AREAS FREE OF CONSTRUCTION DEBRIS AND ANY UNNECCESSARY TRAFFIC CONTROL DEVICES.

24. REGULATORY SPEED THROUGH THE WORK ZONE SHALL BE 25 MPH. ALL OTHER INTERSECTING STREETS SHALL MAINTAIN THEIR EXISTING POSTED SPEEDS RESPECTIVELY.

25. PRIOR TO IMPLEMENTATION OF ANY LANE OR ROAD CLOSURE AS NOTED IN THE TCP PLAN, NOTIFY THE CITY OF FORT LAUDERDALE AT LEAST 14 WORKING DAYS PRIOR TO CLOSURE. BROWARD COUNTY ALLOWS LANE CLOSURES FROM 9AM TO 4PM ONLY.

26. FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AT LOCATIONS PER STANDARD PLANS INDEX 102-600. MESSAGES FOR THE PCMS SHALL BE AS INDICATED ON THE TRAFFIC CONTROL PLANS (TCP) OR AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE IN PLACE 14 DAYS PRIOR TO THE START OF ANY WORK ITEMS AFFECTING EXISTING VEHICULAR AND PEDESTRIAN TRAFFIC. REMOVE PCMS AS DIRECTED BY THE ENGINEER. PCMS INSTALLATION AND REMOVAL SHALL BE PAID FOR UNDER PAY ITEM 102-1. POST PCMS 14 DAYS AHEAD OF LANE CLOSURES AND AT EACH END OF THE PROJECT LIMITS AS:

    XX LANES TO BE CLOSED AHEAD
    (DATE/TIME) TO (DATE/TIME)

27. PERMITTED CONSTRUCITON ACTIVITY TIMES SHALL BE PER CONTRACTOR'S AGREEMENT WITH THE CITY.

28. THE CITY OF FORT LAUDERDALE SHALL APPROVE LANE CLOSINGS AND DETOURS. THE CITY OF FORT LAUDERDALE REQUIRES 14 WORKING DAYS NOTICE IN ADVANCE FOR THE APPROVAL. APPLY FOR THE SAID APPROVAL AND COMPLY WITH THE CONDITIONS SET FORTH IN THE SAID APPROVAL.

29. NO WORK IS ALLOWED ON SUNDAYS AND CITY HOLIDAYS UNLESS OTHERWISE APPROVED BY THE CITY. THE CITY HOLIDAYS ARE:

    NEW YEARS DAY, MARTIN LUTHER KING JR. DAY, PRESIDENTS DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS DAY, THANKSGIVING DAY, DAY AFTER THANKSGIVING, CHRISTMAS EVE, CHRISTMAS DAY.

30. LANE CLOSURE TO BE DONE IN ACCORDANCE WITH THE APPROPRIATE STANDARD PLANS INDEX IF NOT SPECIFIED IN PLANS. PAYMENTS TO BE INCLUDED IN PAY ITEM MAINTENANCE OF TRAFFIC. AT THE DISCRETION OF THE ENGINEER, IF A LANE CLOSURE CAUSES EXTENDED CONGESTION OR DELAY, REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME AS TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.

31. SUBMIT ANY PROVISIONS FOR TRAFFIC DISRUPTION WHICH ARE NOT SHOWN BY THE TRAFFIC CONTROL PLAN, BUT WHICH ARE NECESSARY TO CONSTRUCT THE PROJECT, TO THE ENGINEER FOR REVIEW AND APPROVAL. HAVE AN APPROVED TCP PLAN 21 DAYS PRIOR TO THE COMMENCEMENT OF WORK. SUBMITTAL MATERIAL SHALL INCLUDE SKETCHES, CALCULATIONS, PAY ITEMS, QUANTITIES, AND OTHER DATA REQUIRED BY THE ENGINEER.

32. DO NOT ALTER TRAFFIC AND TRAVEL WAYS TO CREATE A WORK ZONE UNTIL ALL LABOR AND MATERIALS ARE AVAILABLE FOR THE CONSTRUCTION IN THAT AREA.

33. MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION.

34. THE MINIMUM LANE WIDTH SHALL BE 10 FEET.

35. REMOVE ONLY THE AMOUNT OF CONCRETE CURB AND SIDEWALK THAT CAN BE REPLACED WITHIN 48 HOURS OF REMOVAL.

Know what's below.
Call before you dig.

ENGINEER:
ERIC FERGUEIRO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1900 RENAISSANCE BLVD. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598
GENERAL NOTES

SHEET NO.	OF
5	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

max.teddy 3/4/2025 4:02:15 PM K:\WPB_Design\043184304_Riverland Rd\043184304_Riverland Rd\roadway\GNNTRD01.dgn

PEDESTRIAN

36. PHASE CONSTRUCTION SUCH THAT PEDESTRIAN ACCESS ON ONE SIDE OF THE ROAD CAN BE MAINTAINED AT ALL TIMES. SUBMIT PHASING PLAN TO THE CITY. MAINTAIN PEDESTRIAN WALKWAYS FREE OF ANY OBSTRUCTIONS AND HAZARDS SUCH AS HOLES, DEBRIS, MUD, CONSTRUCTION EQUIPMENT, STORED MATERIALS, ETC. CLEARLY DELINEATE ANY HAZARDS NEAR OR ADJACENT TO WALKWAYS, BUS STOPS, AND ACCESS TO TRANSIT VEHICLES. USE FDOT INDEX 102-660 FOR PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS.

37. PROVIDE A WALKING SURFACE IN ACCORDANCE WITH THE APPLICABLE SECTION OF THE AMERICANS WITH DISABILITIES ACT (ADA) FOR PEDESTRIANS. THROUGHOUT CONSTRUCTION, MAINTAIN WALK ROUTES FOR ALL PEDESTRIANS, TRANSIT USERS, AND SCHOOL STUDENTS WITHIN THE VICINITY OF THE CONSTRUCTION ZONE. THIS INCLUDES WALK ROUTES/ACCESS TO AND FROM EXISTING BUS STOPS AND TRANSIT VEHICLES. IF THE CURRENT WALKING SURFACE AND ACCESS TO AND FROM TRANSIT VEHICLES AT BUS STOPS CANNOT BE MAINTAINED, THEN CREATE A 4'-WIDE SMOOTH AND WELL-COMPACTED RECYCLED ASPHALT PAVEMENT (RAPP) WALKWAY. SEPARATE THE WALK ROUTE FROM THE CONSTRUCTION ACTIVITY BY 4'-HIGH ORANGE CONSTRUCTION FENCE FOR THE ENTIRE LENGTH OF THE PROJECT OR THE LENGTH OF THE WALK ROUTE, WHICHEVER IS LESS. PROVIDE AN ALTERNATE LOCATION FOR ANY EXISTING BUS STOP THAT IS IN THE CONSTRUCTION ZONE. CEASE OPERATION OF ALL CONSTRUCTION EQUIPMENT ADJACENT TO A SIDEWALK DURING THE TIMES STUDENTS ARE ARRIVING AT OR LEAVING SCHOOL. CEASE OPERATION OF ALL CONSTRUCTION EQUIPMENT ADJACENT TO A DESIGNATED WALK ROUTE UNLESS SATISFACTORILY BARRICADED FROM THE WALK ROUTE. IN THE CASE THAT A DESIGNATED CROSSING OR ANY PORTION OF THE DESIGNATED WALK ROUTE CANNOT BE MAINTAINED, NOTIFY THE CITY A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO CLOSING THAT ROUTE SO THAT AN ALTERNATE CROSSING/ROUTE CAN BE ESTABLISHED. WHERE PEDESTREIAN ACCESS/WALKWAYS CANNOT BE PROVIDED, DIRECT PEDESTRIANS TO ALTERNATIVE ROUTES BY APPROPRIATE TRAFFIC CONTROL DEVICES. GUIDE AND MAINTAIN PEDESTRIAN, BICYCLE, AND WHEELCHAIR TRAFFIC (SPECIAL ATTENTION IS DIRECTED TO THE EXISTING BUS STOP LOCATION ACCESS) USING APPROVED WARNING LIGHTS, SIGNING, AND CHANNELIZATION DEVICES. INSTALL ANY NECESSARY PAVEMENT OR RECYCLED ASPHALT PAVEMENT (RAPP) TO ACCOMMODATE AN EXISTING OR ALTERNATE WALK ROUTE. ALL CONST ASSOCIATED WITH INSTALLATION, REMOVAL, AND DISPOSAL OF TEMPORARY WALK ROUTES AND ORANGE CONSTRUCTION FENCE SHALL BE PAID FOR UNDER ITEM MAINTENANCE OF TRAFFIC.

BCTED MOT SCHOOL NOTES

THE MAINTENANCE OF TRAFFIC PLAN, PROVIDED BY THE CONTRACTOR, SHALL INCLUDE PROVISIONS FOR PEDESTRIAN AND/OR SCHOOL STUDENT TRAFFIC AS WELL AS VEHICULAR TRAFFIC. THE FOLLOWING ARE MINIMUM REQUIREMENTS:

38. THE SAFE WALK ROUTE FOR ALL SCHOOL STUDENTS WITHIN THE VICINITY OF THE CONSTRUCTION ZONE SHALL BE MAINTAINED DURING STUDENT ARRIVAL AND DISMISSAL TIMES. IF THE CURRENT WALKING SURFACE CANNOT BE MAINTAINED, THEN A TEMPORARY WALKABLE SURFACE SHALL BE CREATED. THE SAFE WALK ROUTE SHALL BE SEPARATED FROM THE CONSTRUCTION ACTIVITY DURING THE ENTIRE LENGTH OF THE PROJECT ENCOMPASSING THE ENTIRE WALK ROUTE WITH PROPER PEDESTRIAN OPENINGS AT DESIGNATED CROSSINGS IN COMPLIANCE WITH FDOT STANDARD PLANS INDEX 102-600 AS WELL AS MEETING ALL ADA REQUIREMENTS.

39. ALL CONSTRUCTION EQUIPMENT ACTIVITY AROUND ANY DESIGNATED CROSSWALK SHALL CEASE TO OPERATE DURING THE STUDENT ARRIVAL AND DISMISSAL TIMES. ALL CONSTRUCTION EQUIPMENT ACTIVITY ADJACENT TO A DESIGNATED WALK ROUTE SHALL CEASE OPERATING UNLESS SATISFACTORILY BARRICADED FROM THE WALK ROUTE.

40. IN THE CASE THAT A DESIGNATED CROSSING OR ANY PORTION OF THE DESIGNATED WALK ROUTE CANNOT BE MAINTAINED, THE CONTRACTOR SHALL NOTIFY THE SPECIAL PROJECTS COORDINATOR AT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION (954) 847-2600, A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO CLOSING THAT ROUTE IN ORDER TO ESTABLISH AN ALTERNATE CROSSING/ROUTE.

41. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ANY NECESSARY PAVEMENT, ROAD ROCK, PAVEMENT MARKINGS AND SIGNING, AND/OR ANY PEDESTRIAN SIGNALIZATION AND/OR SIGNAL MODIFICATION TO ACCOMMODATE AN EXISTING OR ALTERNATE WALK ROUTE THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT.

42. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE STATE CERTIFIED SCHOOL CROSSING GUARDS OR OFF DUTY POLICE OFFICERS TO CROSS STUDENTS AT ALL LOCATIONS OTHER THAN THOSE PREVIOUSLY DESIGNATED. THE CONTRACTOR MAY USE FLAGMEN, BUT ONLY IF THEY ARE STATE CERTIFIED AS A SCHOOL CROSSING GUARD.

43. THIRTY (30) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE SPECIAL PROJECTS COORDINATOR AT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION (954) 847-2600 OR AT TRAFFIC@BROWARD.ORG TO DISCUSS ALL NECESSARY SAFETY MEASURES.

44. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE BROWARD COUNTY SCHOOL BOARD PUPIL TRANSPORTATION DEPARTMENT PERSONNEL IF CONSTRUCTION WILL IMPACT ANY BUS ROUTES:

RUTH MASTERS	ROUTING	(754) 321-4400 EXT. #2309	RUTH.MASTERS@BROWARDSCHOOLS.COM
SIMONE CLOWERS	STUDENT TRANSPORTATION & FLEET SERVICE	(754) 321-4440	SIMONE.CLOWERS@BROWARDSCHOOLS.COM
JENNIFER HUNTER	STUDENT TRANSPORTATION & FLEET SERVICE	(754) 321-4402	JENNIFER.HUNTER@BROWARDSCHOOLS.COM

UPON COORDINATION WITH THE AFOREMENTIONED PERSONNEL, AND IF DEEMED NECESSARY, A PRE-CONSTRUCTION MEETING WILL BE HELD TO DETERMINE ALL BUS ROUTES AND TO MAKE ANY NECESSARY ARRANGEMENTS FOR REROUTING. THE SPECIAL PROJECTS COORDINATOR FROM THE BROWARD COUNTY TRAFFIC ENGINEERING DIVISION, (954) 847-2600, WILL BE NOTIFIED AND MAY ATTEND THE PRE-CONSTRUCTION MEETING.

45. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN APPROVED MAINTENANCE OF TRAFFIC PLAN (MOT), SPECIFIYING THE ABOVE SCHOOL/PEDESTRIAN CONDITIONS, THROUGH THE BROWARD COUNTY TRAFFIC ENGINEERING DIVISION OR THE LOCAL MUNICIPALITY, DEPENDING ON THE ROADWAY JURISDICTION. THE CONDITIONS IN THE MOT ARE FULLY EFFECTIVE AS PART OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL WORK ASSOCIATED WITH THE PROJECT IS IN COMPLIANCE WITH ALL THE REQUIREMENTS OF THE APPROVED MOT.

46. THE CONTRACTOR SHALL ENSURE THAT THERE ARE NO SPEED LIMIT SIGNS INSTALLED WITHIN THE DESIGNATED REDUCED SPEED SCHOOL ZONE AT ANY TIME THROUGHOUT THE PROJECT.

811 Know what's below. Call before you dig.

ENGINEER:
ERIC FERGUEIRO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1000 KENTIA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-645-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	(CHK'D)	DESCRIPTION

PROJECT #12598

GENERAL NOTES

SHEET NO. 6 | OF 38
TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\GNNTRD01.dgn
3/4/2025 4:02:16 PM
max.teddy

BCHCED REF#230914001

N

0 5 20
Feet

E-101
STA. 810+48.97 (19.53' RT)
EXIST. CURB INLET
EXIST. EOP EL. ± 6.29
EXIST. FL AH ± -0.64
EXIST. FL BK ± 0.69
EXIST. FL RT ± 0.67

END CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 810+80.00
MATCH EXIST.

BEGIN PROJECT
BEGIN CONSTRUCTION
BEGIN MILLING & RESURFACING
℄ CONST. RIVERLAND RD
STA. 808+54.64
MATCH EXIST.

+57.34
27.70' LT
MATCH EXIST.

EXIST. DRAINAGE STRUCTURE
(TO REMAIN)

EXIST. DRAINAGE PIPE
(TO REMAIN)

CONST. TYPE F
CURB AND GUTTER

EXIST. PAVEMENT
(TO REMAIN)

REMOVE EXIST SWK.
AND CURB RAMP

+80.00
27.70' LT
MATCH EXIST.

+76.66
27.12' LT
MATCH EXIST.

EXIST. SIDEWALK
(TO REMAIN)

EXIST. FENCE
(TO REMAIN)

REMOVE EXIST.
CONC. SWK.

EXIST. CITY R/W LINE

+13.66
27.22' LT
MATCH EXIST.

±6"

30'

EXIST. TYPE F CURB
AND GUTTER (TO REMAIN)

+76.66
19.09' LT
MATCH EXIST.

CR-C

+13.66
19.32' LT
MATCH EXIST.

CONST. TYPE F
CURB AND GUTTER

+57.34
19.61' LT
MATCH EXIST.

+80.00
19.70' LT
MATCH EXIST.

SEE INSET A

+66.79
3.60' LT

CR-E

SAWCUT

+36.71
4.43' LT

809

RIVERLAND RD

S 1° 57' 27" E

810

811

ADJUST MANHOLE

℄ CONST. RIVERLAND RD

4' R

+66.82
4.04' RT

7' R

+76.52
19.89' RT
MATCH EXIST.

CR-E

SAWCUT

CONST. TYPE F
CURB AND GUTTER

+37.44
8.59' RT

EXIST. DRAINAGE PIPE
(TO REMAIN)

CR-C

+10.34
21.96' RT

59' R

+36.71
29.92' RT
MATCH EXIST.

7'
±

EXIST. CITY R/W LINE

+03.66
29.86' RT
MATCH EXIST.

+76.58
29.76' RT
MATCH EXIST.

CONST. TYPE F
CURB AND GUTTER

EXIST. SIDEWALK
(TO REMAIN)

EXIST. SIDEWALK
(TO REMAIN)

EXIST. TYPE F
CURB (TO REMAIN)

REMOVE EXIST SWK.

EXIST. PAVEMENT
(TO REMAIN)

+90.66
0.38' (LT)
RP

2' R
(TYP.)

+99.66
0.49' (LT)
RP

+90.66
2.07' (RT)
RP

+99.66
2.65' (RT)
RP

+95.16
6.36' (RT)

INSET A
N.T.S

NOTE:
SEE INTERSECTION DETAIL SHEET FOR ADDITIONAL GEOMETRIC DETAILS

LEGEND
- E-XXX — EXISTING DRAINAGE STRUCTURE (TO REMAIN)
- DETECTABLE WARNING SURFACE
- LIMITS OF MILLING & RESURFACING
- DENOTES 6" CONCRETE SIDEWALK AND DRIVEWAY

K:\WPB_Design\043184304_Riverland Rd\043184304_roadway\Plan-20 Scale\PLANRD01.dgn
3/4/2025 4:03:03 PM
max.teddy

ENGINEER:
ERIC FERGUIERO, P.E.
FLEG. No.86211
DATE: 08/2024

ADD: 1920 PENNA AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT
DATE: 08/2024
DESIGNED BY: MT
SCALE: AS SHOWN
CHECKED BY: BK
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY PLAN

SHEET NO.	OF
7	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

BCHCED REF#230914001

CITY OF FORT LAUDERDALE R/W

BROWARD COUNTY R/W

E-102
STA. 817+89.96 (10.04' LT)
EXIST. MANHOLE
EXIST. RIM EL. ± 4.93
EXIST. FL LT ± 0.48
EXIST. FL RT ± 0.98

E-103
STA. 818+01.99 (15.21' LT)
EXIST. CURB INLET
EXIST. EOP EL. ± 4.27
EXIST. FL RT ± 0.62

EXIST. CURB & GUTTER (TO REMAIN)

EXIST. SIDEWALK (TO REMAIN)

EXIST. CITY R/W LINE

EXIST. DRAINAGE PIPE (TO REMAIN)

EXIST. DRAINAGE STRUCTURE (TO REMAIN)

+60.85
34.86' LT
MATCH EXIST.

CONST. TYPE F CURB AND GUTTER

+55.07
34.85' LT

+55.30
26.59' LT

EXIST. PEDESTRIAN CONTROL SIGNAL (TO REMAIN)
REMOVE AND REPLACE PULL BOXES (2)

+84.80
25.33' LT
MATCH EXIST.

CONST. CONC. SWK

EXIST. COUNTY R/W LINE

+60.87
26.58' LT

EXIST. SIDEWALK (TO REMAIN)

+47.60
26.60' LT

+47.67
23.22' LT

+65.10
23.12' LT

±6'

±6'

EXIST. PAVEMENT (TO REMAIN)

E-103

E-102

END CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 818+88.25
MATCH EXIST.

+88.25
15.02' LT
MATCH EXIST.

35'

818

819

820

+13.62
23.14' LT
MATCH EXIST.

REMOVE EXIST. CONC. SWK

+31.74
15.21' LT

221' R

CR-B

+67.06
15.15' LT

EXIST. DRIVEWAY (TO REMAIN)

+13.62
15.14' LT
MATCH EXIST.

CURVE CL_9

N 87° 37' 47" E

RIVERLAND ROAD

℄ CONST. RIVERLAND ROAD

BEGIN CONSTRUCTION.
℄ CONST. RIVERLAND RD
STA. 818+13.62
MATCH EXIST.

PT STA. 818+72.45

+36.90
22.11' RT
MATCH EXIST.

+55.51
14.99' RT

CR-E

225' R

+73.28
14.99' RT

EXIST. PAVEMENT (TO REMAIN)

EXIST. SIDEWALK (TO REMAIN)

+88.25
14.80' RT
MATCH EXIST.

5'

±5'

±5'

EXIST. CONCRETE RIBBON CURB (TO REMAIN)

CONST. TYPE F CURB AND GUTTER

+68.63
26.57' RT
MATCH EXIST.

+44.13
28.50' RT
MATCH EXIST.

EXIST. FIRE HYDRANT (TO REMAIN)

EXIST. COUNTY R/W LINE

EXIST. CITY R/W LINE

TORTUGAS LANE

REMOVE EXIST. CONC. SWK

EXIST. PEDESTRIAN CONTROL SIGNAL (TO REMAIN)

CONST. CONC. SWK

CURVE DATA CL_9
PI STA. = 817+57.21
Δ = 67° 58' 20" (LT)
D = 25° 27' 53"
T = 151.68
L = 266.93
R = 225.00
PC STA. = 816+05.53
PT STA. = 818+72.45

EXIST. CITY R/W LINE

NOTE:

SEE INTERSECTION DETAIL SHEET FOR ADDITIONAL GEOMETRIC DETAILS

LEGEND

- E-XXX — EXISTING DRAINAGE STRUCTURE (TO REMAIN)
- DETECTABLE WARNING SURFACE
- DENOTES RAISED INTERSECTION
- DENOTES 6" CONCRETE SIDEWALK AND DRIVEWAY
- LIMITS OF MILLING & RESURFACING
- DENOTES SOD
- DENOTES RAMP TO RAISED INTERSECTION

0 5 20
Feet

N

ENGINEER:
ERIC FERGUERO, P.E.
FLEG. No.86211
DATE: 08/2024

ADD: 1800 NEKTA WAY, SUITE 200
POMPANO BEACH, FL 33411
TEL: 561-645-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | DATE: 08/2024 | SCALE: AS SHOWN | CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY PLAN

SHEET NO. 8 | OF 38

TOTAL: 38

CAD FILE:

DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\Plan-20 Scale\PLANRD02.dgn 4:03:16 PM 3/4/2025 max.teddy

BCHCED REF#230914001

EXIST. DRAINAGE PIPE (TO REMAIN)
SW 35TH AVE
18" RCP
+21.01 71.86' LT MATCH EXIST.
EXIST. DRAINAGE STRUCTURE (TO REMAIN)
E-104
STA. 837+16.94 (71.87' LT)
EXIST. DBI
EXIST. GRATE EL. ± 5.70
EXIST. FL LT ± 0.10
+46.09 71.84' LT MATCH EXIST.
+73.89 15.09' LT MATCH EXIST.
+64.19 34.07' LT MATCH EXIST.
REMOVE PAVEMENT
EXIST. FENCE (TO REMAIN)
CONST. TYPE F CURB AND GUTTER
+09.78 44.77' LT MATCH EXIST.
+98.98 34.70' LT MATCH EXIST.
+22.00 50.82' LT
+45.87 44.99' LT
+20.60 41.01' LT
+46.20 40.99' LT
REMOVE PAVEMENT
CONST. TYPE F CURB AND GUTTER
+57.79 43.51' LT MATCH EXIST.
REMOVE EXIST. CONC. SWK
EXIST. COUNTY R/W LINE MATCH EXIST.
CONST. FLARED DRIVEWAY PER FDOT INDEX 522-003
ADJUST METER BOXES (2)
EXIST. COUNTY R/W LINE
EXIST. SIDEWALK TO REMAIN
+65.89 33.82' LT
+59.88 28.99' LT
CONST. CONC. SWK
EXIST. PAVEMENT TO REMAIN
EXIST. SIDEWALK (TO REMAIN)
END CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 838+73.89
MATCH EXIST.
CR-F
ADJUST MANHOLE
30' R
35' R
PI STA. 837+39.53
837
838
N 87° 37' 47" E
N 87° 37' 47" E
RIVERLAND ROAD
℄ CONST. RIVERLAND ROAD
EXIST. PAVEMENT (TO REMAIN)
+00.00 15.07' RT
BEGIN CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 836+96.49
MATCH EXIST.
+00.00 26.83' RT MATCH EXIST.
CONST. CONC. SIDEWALK
EXIST. SIDEWALK (TO REMAIN)
REMOVE EXIST. CONC. SWK
EXIST. FENCE (TO REMAIN)
ADJUST PULL BOX (CROWN CASTLE)
ADJUST VALVES (2)
ADJUST MANHOLE
CR-E
CR-F
CONST. TYPE F CURB AND GUTTER
ADJUST VALVE
ADJUST VALVES (2)
+40.17 26.96' RT
+67.61 35.24' RT
+93.28 40.27' RT
+18.30 15.27' RT
+48.94 22.29' RT
+48.94 28.43' RT
+19.00 27.36' RT
+73.89 15.33' RT MATCH EXIST.
+64.19 27.17' RT MATCH EXIST.
CONST. CONCRETE SIDEWALK
CONST. FLARED DRIVEWAY PER FDOT INDEX 522-003
EXIST. COUNTY R/W LINE
MATCH EXIST.
EXIST. PAVEMENT (TO REMAIN)
REMOVE PAVEMENT
+70.90 50.09' RT
EXIST. COUNTY R/W LINE
SW 35TH AVE (GULFSTREAM LN)
22'
REMOVE EXIST. CONC. SWK
EXIST. FIRE HYDRANT (TO REMAIN)
EXIST. FENCE (TO REMAIN)
REMOVE PAVEMENT
EXIST. COUNTY R/W LINE
+80.00 89.18' RT MATCH EXIST.
+92.92 89.33' RT MATCH EXIST.
NOTE:
SEE INTERSECTION DETAIL SHEET FOR ADDITIONAL GEOMETRIC DETAILS
35'
16'
15'
±5'
4'
5'
10'
20'

LEGEND
- E-XXX — EXISTING DRAINAGE STRUCTURE (TO REMAIN)
- DETECTABLE WARNING SURFACE
- DENOTES RAISED INTERSECTION
- DENOTES 6" CONCRETE SIDEWALK AND DRIVEWAY
- LIMITS OF MILLING & RESURFACING
- DENOTES SOD
- DENOTES RAMP TO RAISED INTERSECTION
- DENOTES RAMP TO RAISED INTERSECTION WITH PATTERNED PAVEMENT
- DENOTES RAISED INTERSECTION WITH PATTERNED PAVEMENT

0 5 20
Feet

ENGINEER:
ERIC FEGLIBERO, P.E.
REG. No.86211
DATE:08/2024
ADD: 1800 NEBRA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-645-0855
FAX: 561-883-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY (CHK'D)	DESCRIPTION
REVISIONS			

PROJECT #12598

ROADWAY PLAN

SHEET NO.	OF
9	38

TOTAL: 38
CAD FILE:
CONSTRUCTING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430\4_Riverland Rd\04318430\4_roadway\Plan-20 Scale\PLANRD03.dgn
3/4/2025 4:03:28 PM
max.teddy

BCHCED REF#230914001

BEGIN CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 852+27.40
MATCH EXIST.

END CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 852+58.86
MATCH EXIST.

EXIST. SIDEWALK (TO REMAIN)
EXIST. FENCE (TO REMAIN)
+34.86
34.87' LT
MATCH EXIST.
CONST. CONC. SWK
+58.86
34.87' LT
MATCH EXIST.
EXIST. CITY R/W LINE
±5'
+34.86
15.13' LT
MATCH EXIST.
CONST. TYPE F
CURB AND GUTTER
6'
+27.40
15.20' LT
MATCH EXIST.
+58.86
15.13' LT
MATCH EXIST.
EXIST. SIDEWALK (TO REMAIN)
35'
CR-E
EXIST. PAVEMENT (TO REMAIN)
EXIST. DRIVEWAY (TO REMAIN)
EXIST. PAVEMENT (TO REMAIN)
852
853
N 87° 37' 47" E
N 87° 37' 47" E
RIVERLAND ROAD
℄ CONST. RIVERLAND ROAD
+34.86
16.61' RT
REMOVE EXIST. CURB RAMP
+27.40
16.11' RT
MATCH EXIST.
CR-E
CONST. TYPE F CURB AND GUTTER
EXIST. PAVEMENT (TO REMAIN)
+58.86
16.63' RT
MATCH EXIST.
6'
±5'
±5'
+58.86
28.00' RT
MATCH EXIST.
EXIST. SIDEWALK (TO REMAIN)
35'
+27.40
28.17' RT
MATCH EXIST.
EXIST. PEDESTRIAN SIGNAL (TO REMAIN)
EXIST. CITY R/W LINE
+52.95
28.17' RT
EXIST. SIDEWALK (TO REMAIN)
CONST. CONC. SWK
REMOVE EXIST. CONC. SWK
SW 32 ND TERR./
BIMINI LANE

NOTE:
SEE INTERSECTION DETAIL SHEET FOR ADDITIONAL GEOMETRIC DETAILS

LEGEND
- E-XXX — EXISTING DRAINAGE STRUCTURE (TO REMAIN)
- DETECTABLE WARNING SURFACE
- DENOTES RAISED INTERSECTION
- DENOTES 6" CONCRETE SIDEWALK AND DRIVEWAY
- LIMITS OF MILLING & RESURFACING
- DENOTES SOD
- DENOTES RAMP TO RAISED INTERSECTION

0 5 20
Feet

ENGINEER:
ERIC FERGUERO, P.E.
REG. No.86211
DATE: 08/2024
ADD: 1920 PALM AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT
DESIGNED BY: MT
CHECKED BY: BK
DATE: 08/2024
SCALE: AS SHOWN
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY PLAN

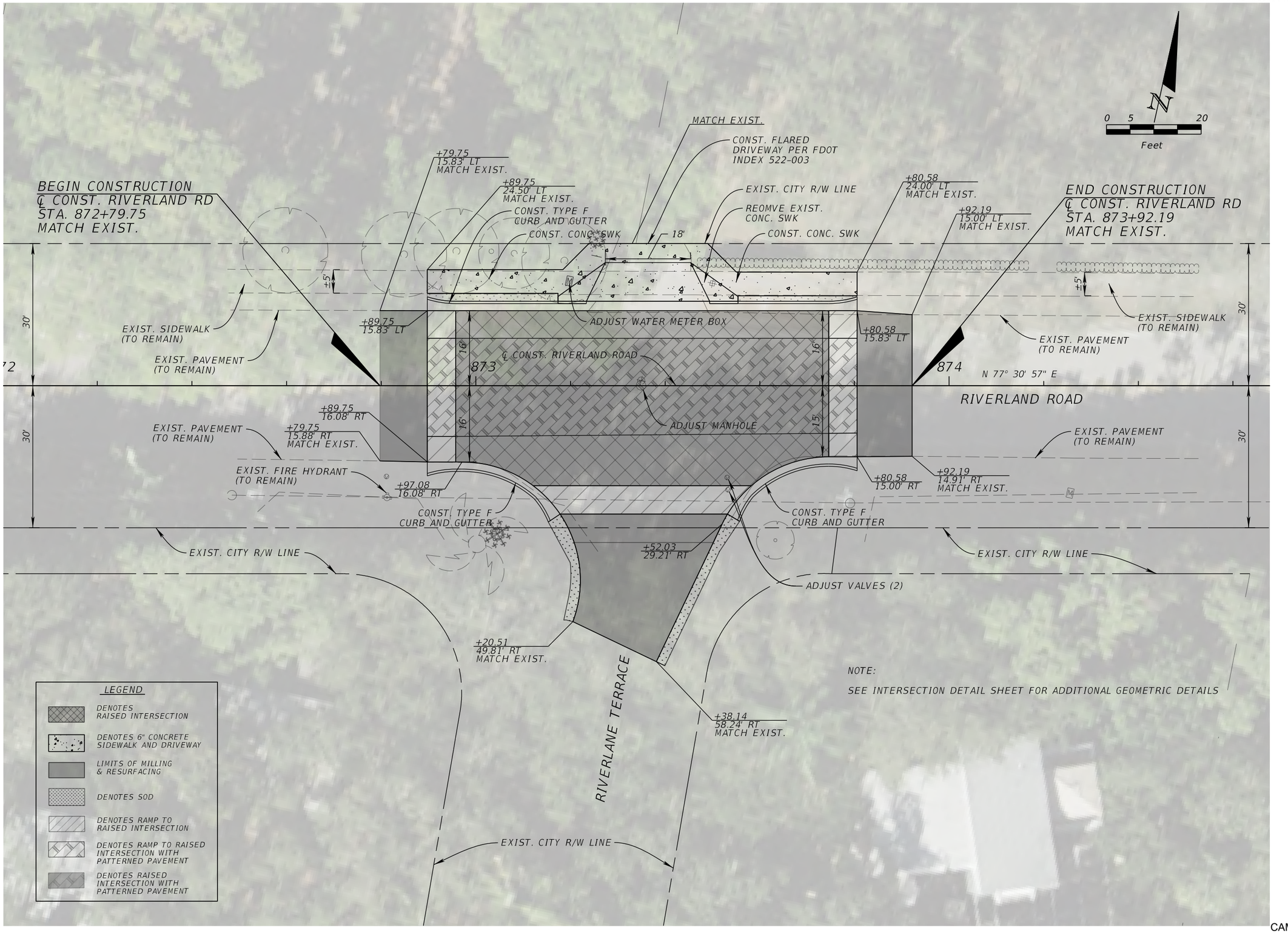
SHEET NO.	OF
10	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\Plan-20 Scale\PLANRD04.dgn
3/4/2025 4:03:38 PM
max.teddy

BCHCED REF#230914001



K:\WPB_Design\04318430\4_Riverland Rd\04318430\4_roadway\Plan-20 Scale\PLANRD05.dgn
3/4/2025 4:03:48 PM
maxiteddy

ENGINEER:
ERIC FERGUERRO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 NEWTON AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT
DESIGNED BY: MT
DATE: 08/2024
SCALE: AS SHOWN
CHECKED BY: BK
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION
REVISIONS				

PROJECT #12598

ROADWAY PLAN

SHEET NO.	OF
11	38

TOTAL: 38
CAD FILE:
CONSTRUCTING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

BCHCED REF#230914001

S-101
STA. 888+05.70 (15.43' LT)
INLET TYPE P-6
INDEX 425-010 & 425-021
EOP EL. 2.07
18" PIPE FL RT -2.15

S-102
STA. 888+10.03 (18.35' RT)
DBI TYPE C W/APRON
INDEX 425-010 & 425-052
GRATE EL. 2.10
18" PIPE FL LT -2.25
18" PIPE FL AH -2.25

S-103
STA. 888+65.95 (42.46' RT)
DBI TYPE C W/APRON (3.5' DIA.)
INDEX 425-052 & 425-010
GRATE EL. 1.90
18" PIPE FL LT -1.00

S-104
STA. 888+72.52 (19.87' RT)
MANHOLE TYPE P-8 (4.0' DIA.)
INDEX 425-001 & 425-010
RIM EL. 2.71
18" PIPE FL BK -2.45
18" PIPE FL LT -2.25
18" PIPE FL RT -2.45

S-105
STA. 888+77.66 (30.29' RT)
MANHOLE TYPE P-8 (4.0' DIA.)
INDEX 425-001 & 425-010
RIM EL. 2.63
18" PIPE FL LT -2.50
18" PIPE FL RT -1.05
24" PIPE FL AH ± -1.50 (MATCH EXIST.)

S-106
STA. 889+13.54 (18.90' LT)
DBI TYPE E W/APRON
INDEX 425-010 & 425-052
GRATE EL. 1.67
18" PIPE FL RT -2.15

0 5 20
Feet

RIVERLAND ROAD

888

889

CONST. TYPE F CURB AND GUTTER
CONST. CONC. SWK
EXIST. CITY R/W LINE
REMOVE EXIST. DRAINAGE STRUCTURE
REMOVE EXIST. DRAINAGE PIPE
REMOVE EXIST. DRAINAGE STRUCTURE

+13.77 15.24' LT
+91.00 22.95' LT MATCH EXIST.
+95.18 26.53' LT
+08.92 15.24' LT
+17.18 29.58' LT
+23.63 29.24' LT MATCH EXIST.
+23.63 15.06' LT MATCH EXIST.

END CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 889+23.63
MATCH EXIST.

EXIST. SIDEWALK (TO REMAIN)
EXIST. PAVEMENT (TO REMAIN)
+91.00 15.60' LT MATCH EXIST.
CONST. 33 LF OF 18" PIPE
+53.49 16.74' LT
+56.55 16.74' LT
+73.27 22.93' LT
ADJUST GAS VALVE (BY OTHERS)
REMOVE EXIST. DRAINAGE PIPE
℄ CONST. RIVERLAND ROAD
ADJUST MANHOLE
REMOVE EXIST. DRAINAGE STRUCTURE
+13.77 15.23' RT
+29.72 15.26' RT
+91.46 17.47' RT
+08.80 17.70' RT
CONST. 53 LF OF 18" PIPE
+23.63 17.95' RT MATCH EXIST.
CURVE CL_17
EXIST. PAVEMENT (TO REMAIN)
EXIST. SIDEWALK (TO REMAIN)
EXIST. CITY R/W LINE
EXIST. PAVEMENT (TO REMAIN)
CONST. TYPE F CURB AND GUTTER
REMOVE EXIST. DRAINAGE STRUCTURE
CONST. 61 LF OF 18" PIPE
+42.51 36.96' RT
REMOVE EXIST. DRAINAGE PIPE
CONST. 8 LF OF 18" PIPE
+67.82 32.44' RT
EXIST. FIRE HYDRANT (TO REMAIN)
+41.01 40.05' RT MATCH EXIST.
+58.64 49.90' RT MATCH EXIST.
CONST. 8 LF OF 24" PIPE CONNECT TO EXIST. WITH CONCRETE JACKET
REMOVE EXIST. DRAINAGE STRUCTURE
CONST. 14 LF OF 18" PIPE
CONST. TYPE F CURB AND GUTTER
EXIST. CITY R/W LINE
EXIST. PAVEMENT (TO REMAIN)
SW 27TH AVENUE/ WATERSIDE DRIVE

BEGIN CONSTRUCTION
℄ CONST. RIVERLAND RD
STA. 887+91.00
MATCH EXIST.
+91.00 15.20' RT MATCH EXIST.

NOTE:
SEE INTERSECTION DETAIL SHEET FOR ADDITIONAL GEOMETRIC DETAILS

CURVE DATA CL_17
PI STA. = 893+10.29
Δ = 79° 27' 27" (LT)
D = 6° 39' 44"
T = 714.72
L = 1,192.65
R = 860.00
PC STA. = 885+95.57
PT STA. = 897+88.21

LEGEND
E-XXX EXISTING DRAINAGE STRUCTURE (TO REMAIN)
S-XXX PROPOSED DRAINAGE STRUCTURE
DENOTES RAISED INTERSECTION
DENOTES 6" CONCRETE SIDEWALK AND DRIVEWAY
LIMITS OF MILLING & RESURFACING
DENOTES SOD
DENOTES RAMP TO RAISED INTERSECTION
DENOTES RAMP TO RAISED INTERSECTION WITH PATTERNED PAVEMENT
DENOTES RAISED INTERSECTION WITH PATTERNED PAVEMENT

ENGINEER:
ERIC FEGLIEIRO, P.E.
REG. No.86211
DATE: 08/2024

ADD: 1800 NEBRA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-645-0855
FAX: 561-883-8175

DRAWN BY: MT | DATE: 08/2024
DESIGNED BY: MT | SCALE: AS SHOWN
CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY PLAN

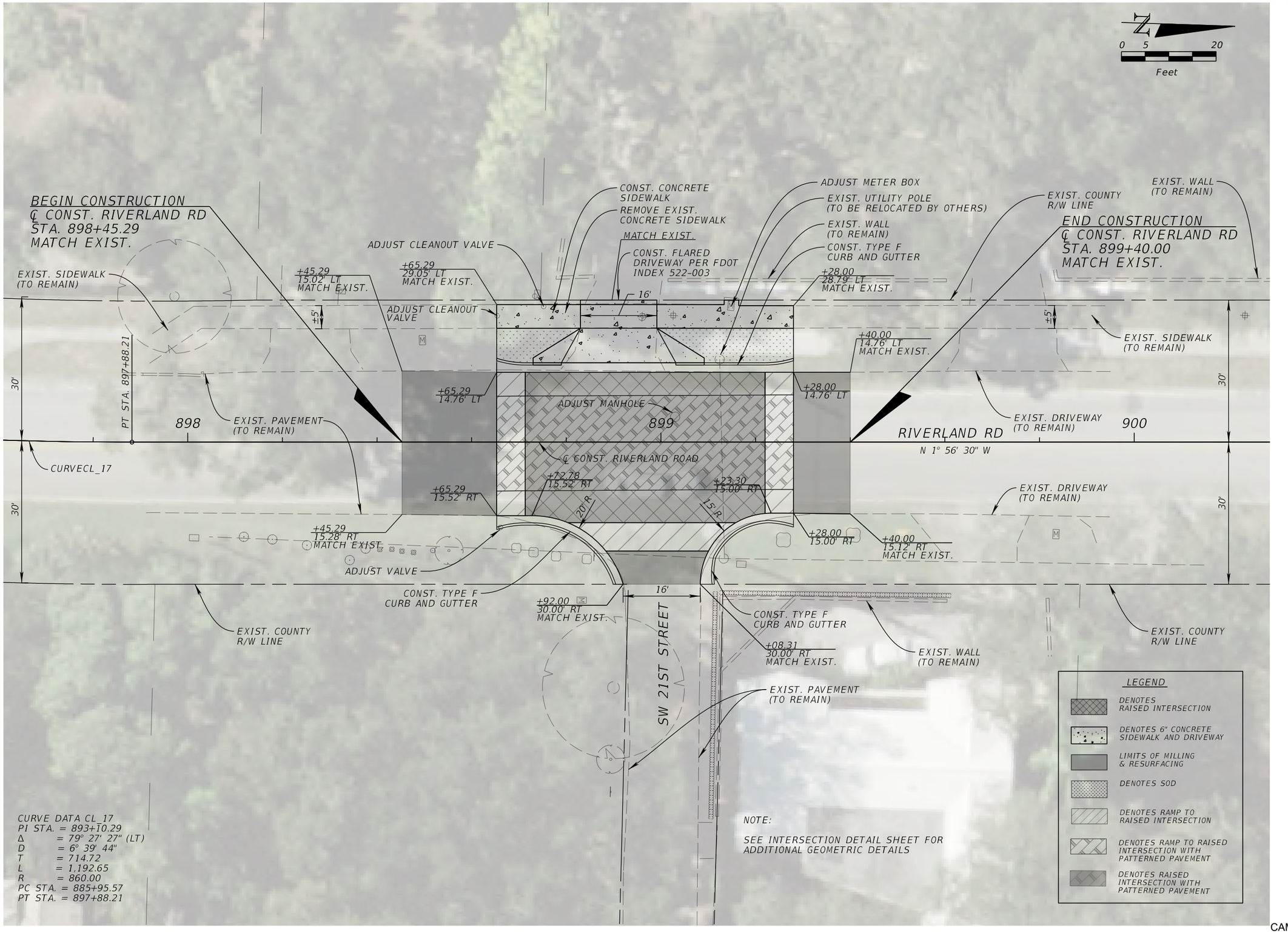
SHEET NO.	OF
12	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\Plan-20 Scale\PLANR006.dgn 4:03:58 PM 3/4/2025 max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 NEKTA WAY, SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY:	CHECKED BY:	FIELD BOOK:
MT	BK	

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	DESCRIPTION
REVISIONS			

PROJECT #12598

ROADWAY PLAN

SHEET NO.	OF
13	38

TOTAL: 38

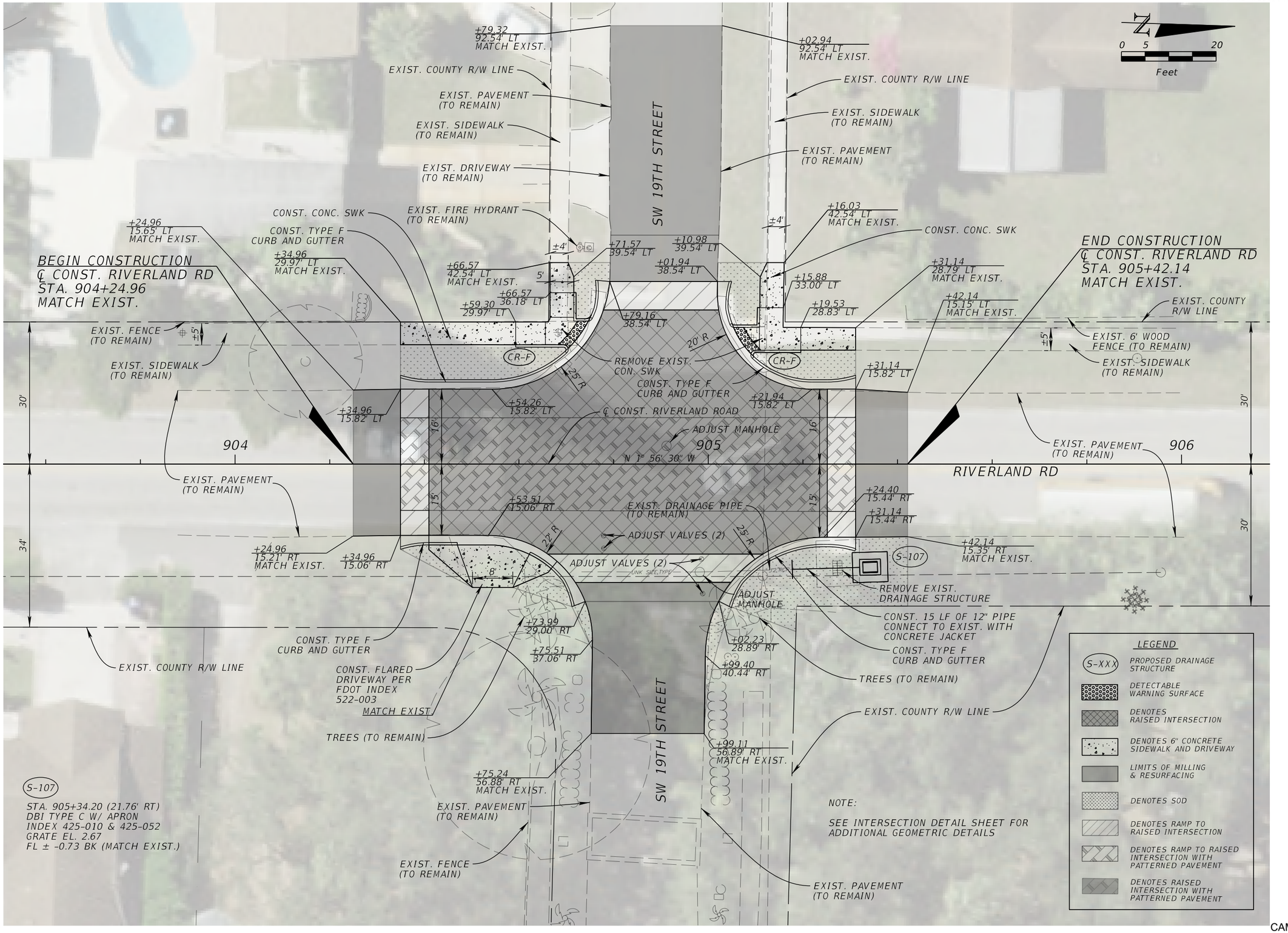
CAD FILE:

CONTRACTING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430 4_Riverland Rd\04318430 4\roadway\Plan-20 Scale\PLANRD07.dgn
3/4/2025 4:04:08 PM
max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 NEWTON AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE: 08/2024	
MT	DESIGNED BY: MT	SCALE: AS SHOWN
	CHECKED BY: BK	FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY PLAN

SHEET NO.	OF
14	38

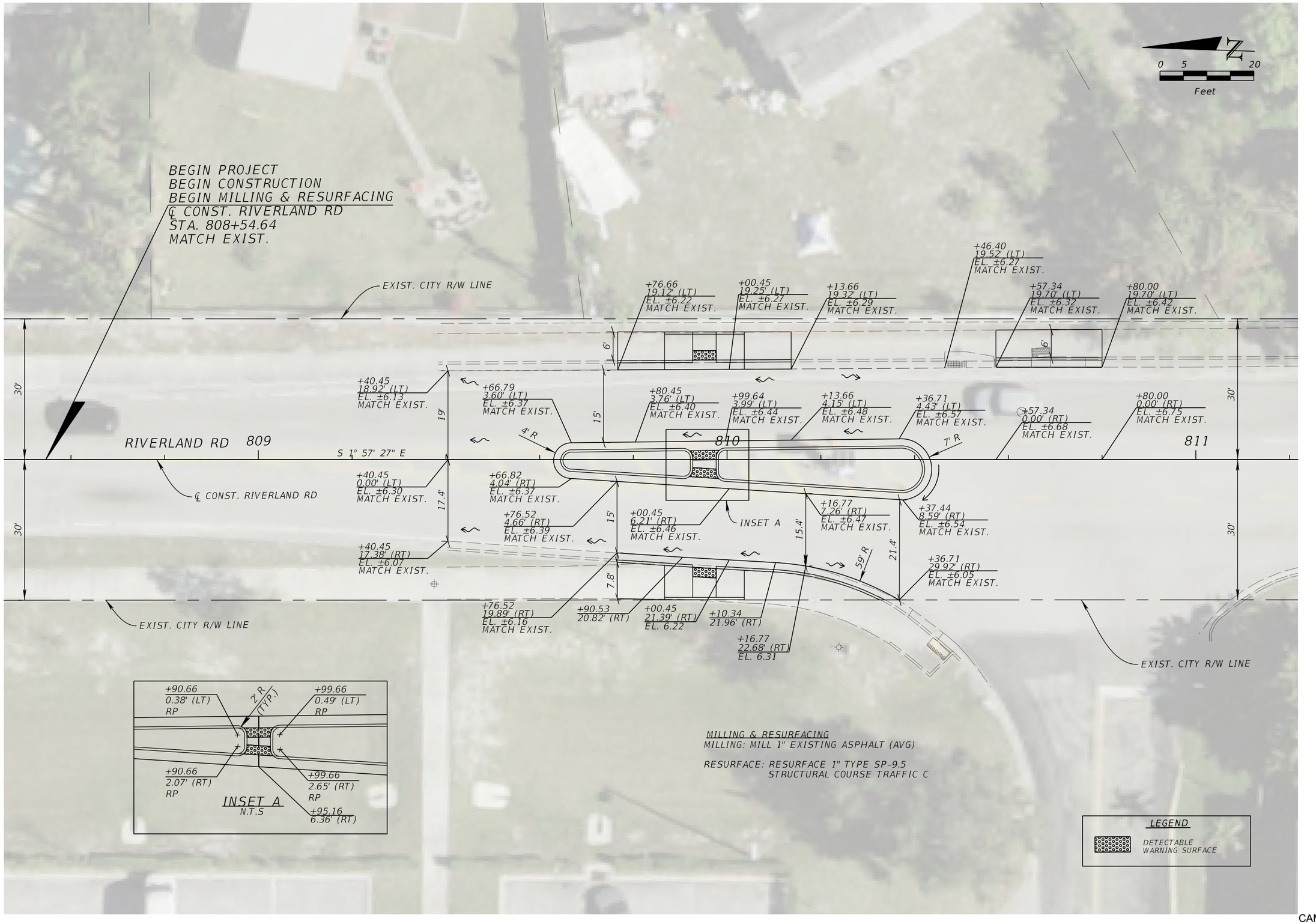
TOTAL: 38

CAD FILE:

DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430 4_Riverland Rd\04318430 4\roadway\Plan-20 Scale\PLANRD08.dgn 3/4/2025 4:04:16 PM max.teddy



ENGINEER:
ERIC FERGUIERO, P.E.
REG. No.86211
DATE: 08/2024

ADD: 1900 RENAISSANCE BLVD. SUITE 200
BOCA RATON, FL 33411
TEL: 561-645-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY:	CHECKED BY:	
MT	BK	
FIELD BOOK:		

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

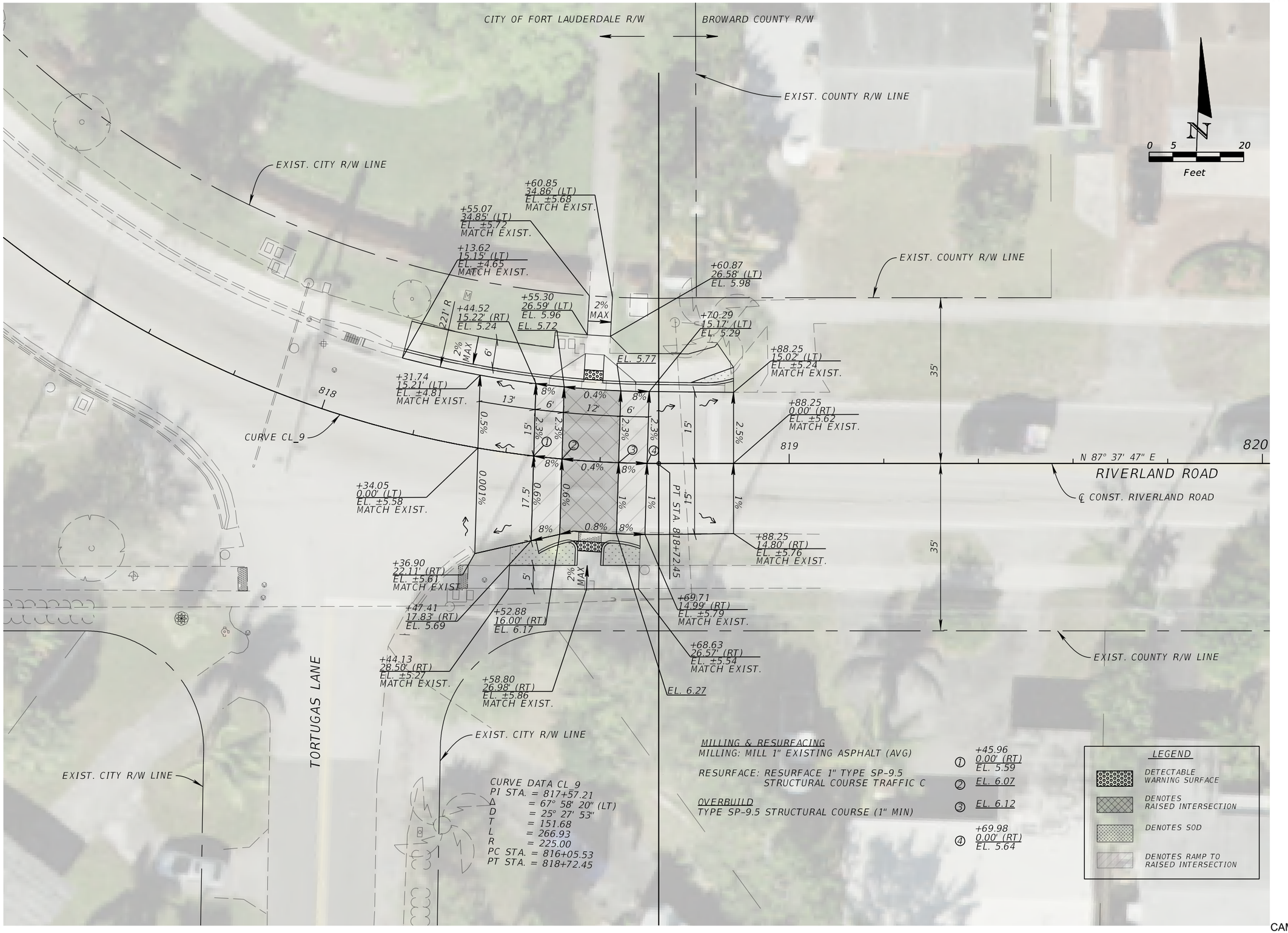
INTERSECTION DETAIL

SHEET NO.	OF
15	38
TOTAL: 38	
CAD FILE:	
DRAWING FILE NO.	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430 4_Riverland Rd\04318430 4\roadway\Grading Plans\INTDRD01.dgn
3/4/2025 4:04:24 PM
max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
FDOT No.86211
DATE: 08/2024

ADD: 1800 NEKTA WAY, SUITE 200
POMPANO BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY:	CHECKED BY:	FIELD BOOK:
MT	BK	

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

REVISIONS

PROJECT #12598

INTERSECTION DETAIL

SHEET NO.	OF
16	38

TOTAL: 38

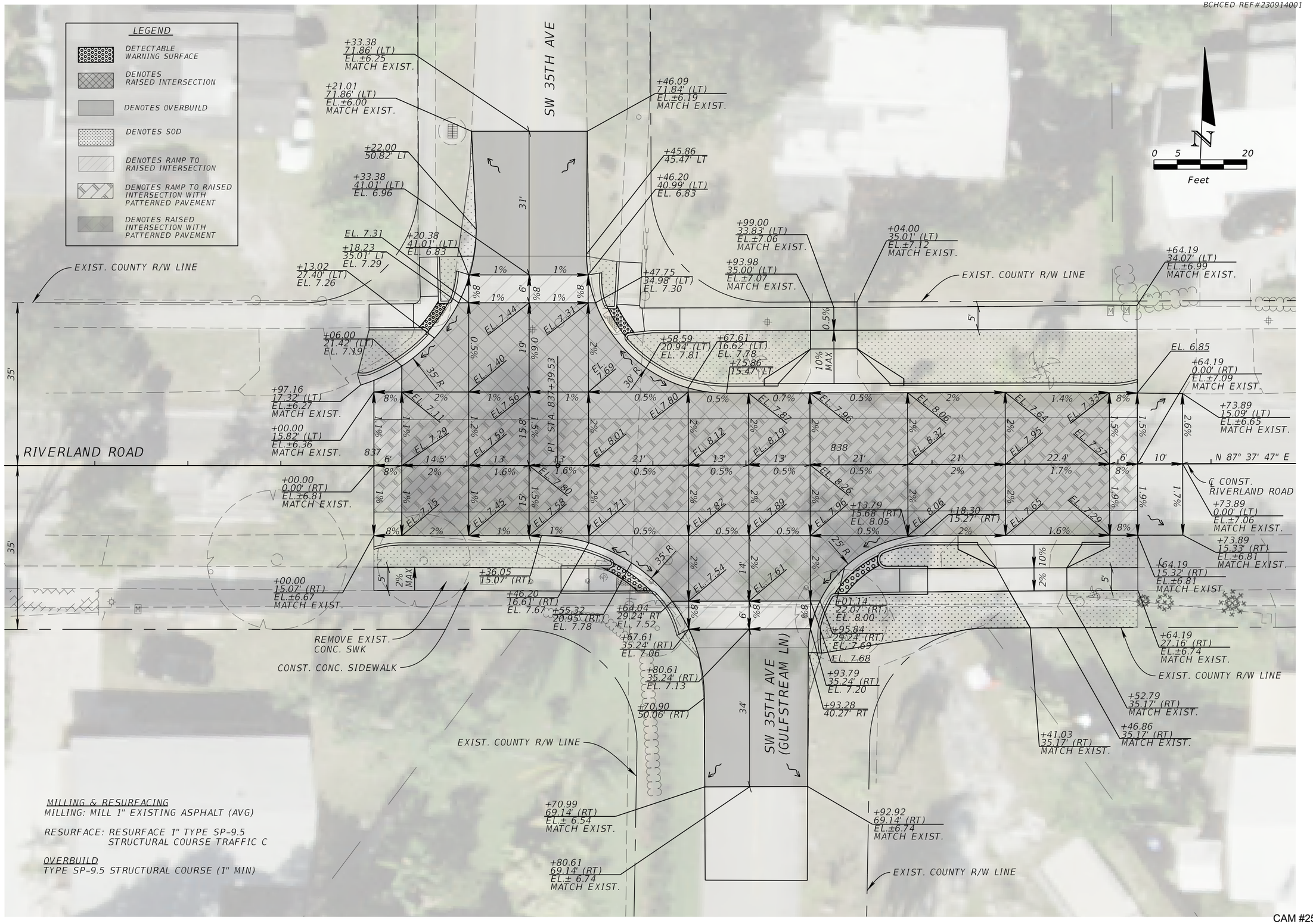
CAD FILE:

DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304_Riverland Rd\roadway\Grading Plans\INTDRD02.dgn
3/4/2025 4:04:31 PM
max.teddy

BCHCED REF#230914001



MILLING & RESURFACING
MILLING: MILL 1" EXISTING ASPHALT (AVG)

RESURFACE: RESURFACE 1" TYPE SP-9.5
STRUCTURAL COURSE TRAFFIC C

OVERBUILD
TYPE SP-9.5 STRUCTURAL COURSE (1" MIN)

ENGINEER:
ERIC FERGUIERO, P.E.
FIRM: No.#62211
DATE: 08/2024

ADD: 1800 PENNA AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE: 08/2024
MT	
DESIGNED BY: MT	SCALE: AS SHOWN
CHECKED BY: BK	
FIELD BOOK:	

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION
REVISIONS				

PROJECT #12598

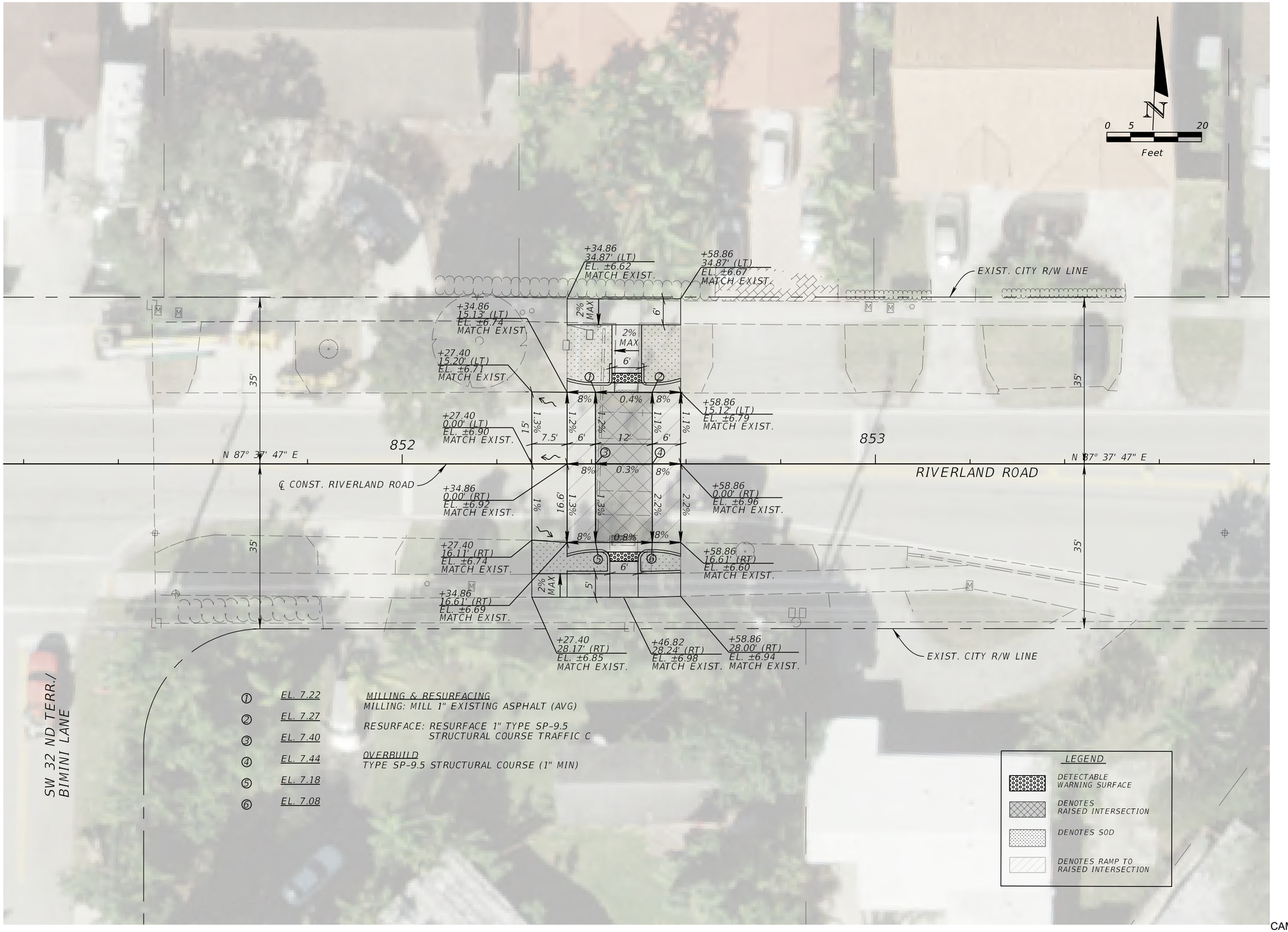
INTERSECTION DETAIL

SHEET NO.	OF
17	38
TOTAL: 38	
CAD FILE:	
DRAWING FILE NO.	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430\4 Riverland Rd\04318430\4 roadway\Grading Plans\INTDRD03.dgn 3/4/2025 4:04:38 PM max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
LIC. No.86211
DATE: 08/2024

ADD: 1800 NEWTON AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE: 08/2024
MT	SCALE: AS SHOWN
DESIGNED BY: MT	
CHECKED BY: BK	FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

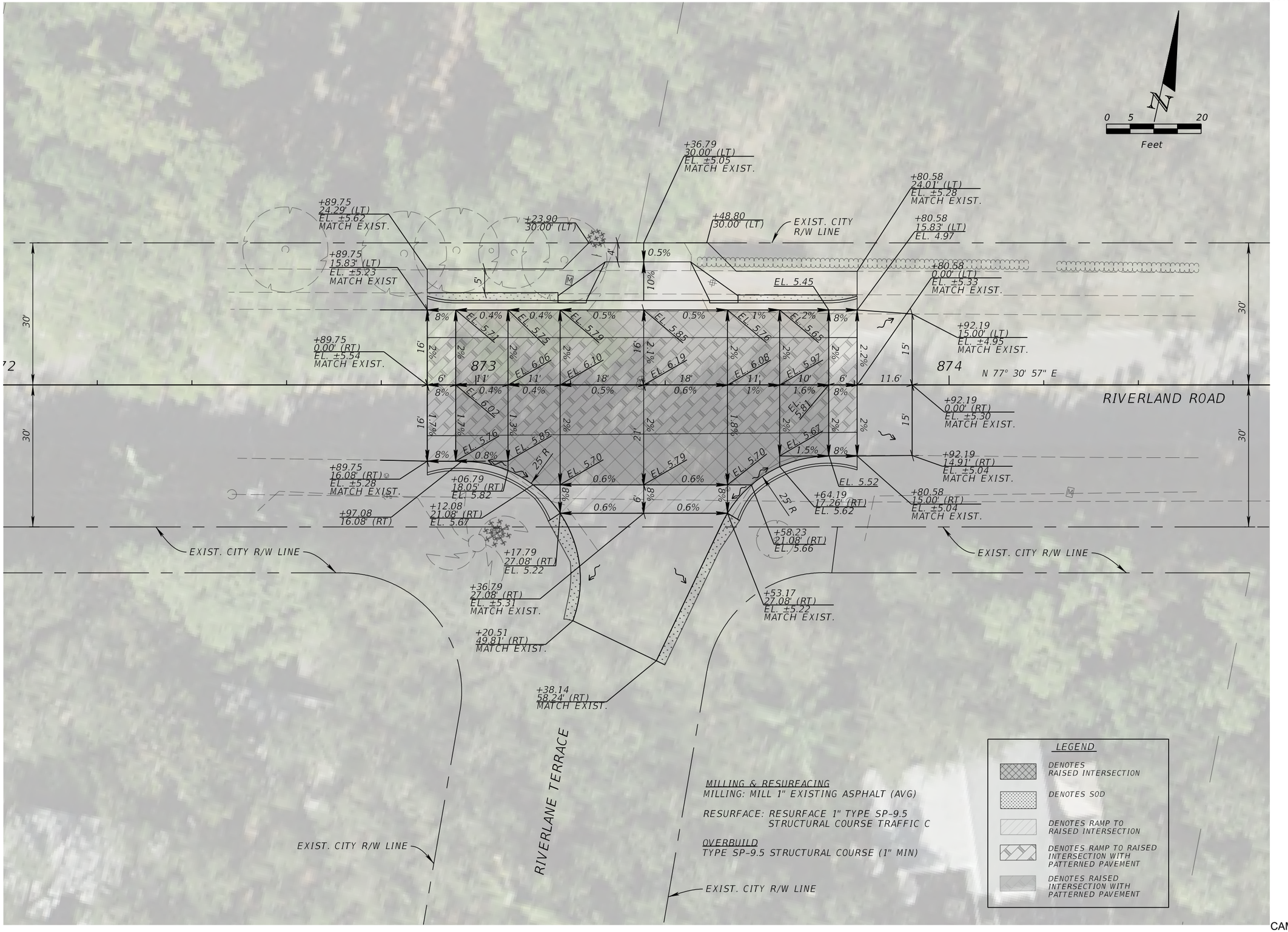
INTERSECTION DETAIL

SHEET NO.	OF
18	38
TOTAL: 38	
CAD FILE:	
DRAWING FILE NO.	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\Grading Plans\INTDRD04.dgn
3/4/2025 4:04:45 PM
max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
REG. No.86211
DATE: 08/2024

ADD: 1800 NEBRA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-645-0855
FAX: 561-863-8175

DRAWN BY: MT
DATE: 08/2024
DESIGNED BY: MT
SCALE: AS SHOWN
CHECKED BY: BK
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

INTERSECTION DETAIL

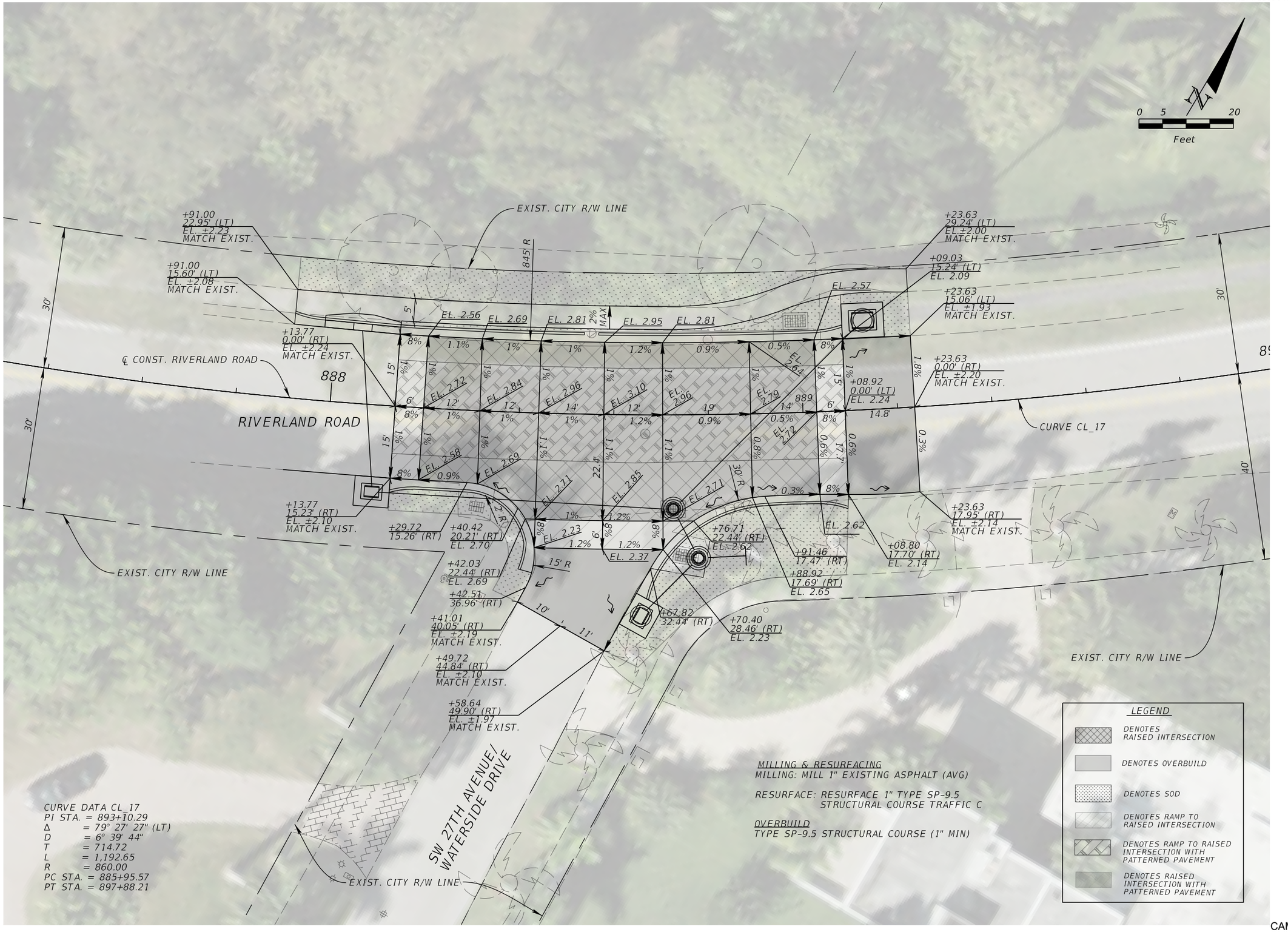
SHEET NO.	OF
19	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\Grading Plans\INTDRD05.dgn
3/4/2025 4:04:51 PM
max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
FL REG. No.86211
DATE: 08/2024

ADD: 1800 NEKTA WAY, SUITE 200
J.B.B., FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY: MT	CHECKED BY: BK	FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

REVISIONS

PROJECT #12598

INTERSECTION DETAIL

SHEET NO.	OF
20	38

TOTAL: 38

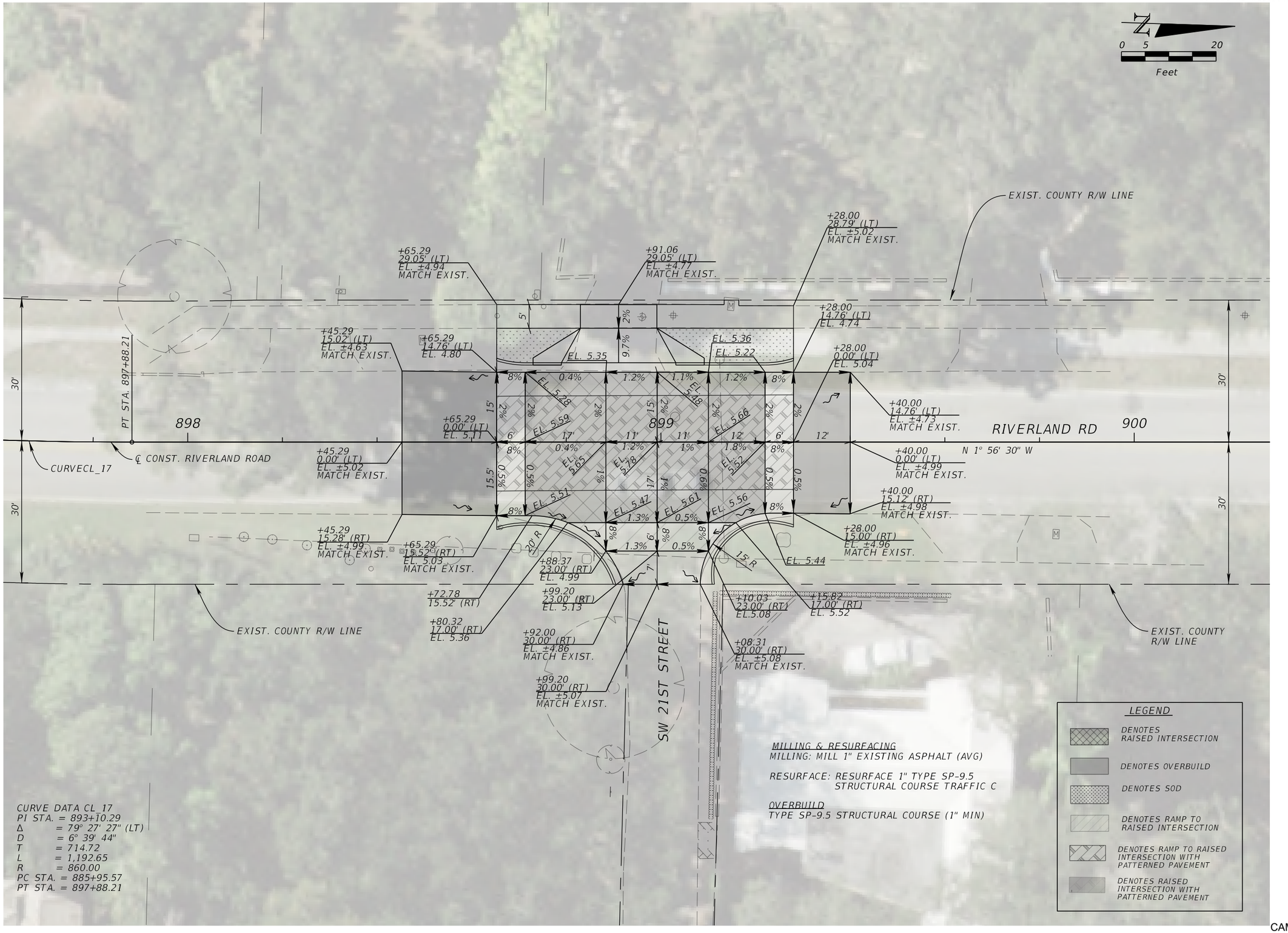
CAD FILE:

DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\Grading Plans\INTDRD06.dgn
3/4/2025 4:04:57 PM
max.teddy

BCHCED REF#230914001



ENGINEER:
ERIC FERGUIERO, P.E.
FIRM: No.#6211
DATE: 08/2024

ADD: 1800 NEKTA WAY, SUITE 200
PONTE VEDRA BEACH, FL 32081
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT
DESIGNED BY: MT
CHECKED BY: BK
DATE: 08/2024
SCALE: AS SHOWN
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

INTERSECTION DETAIL

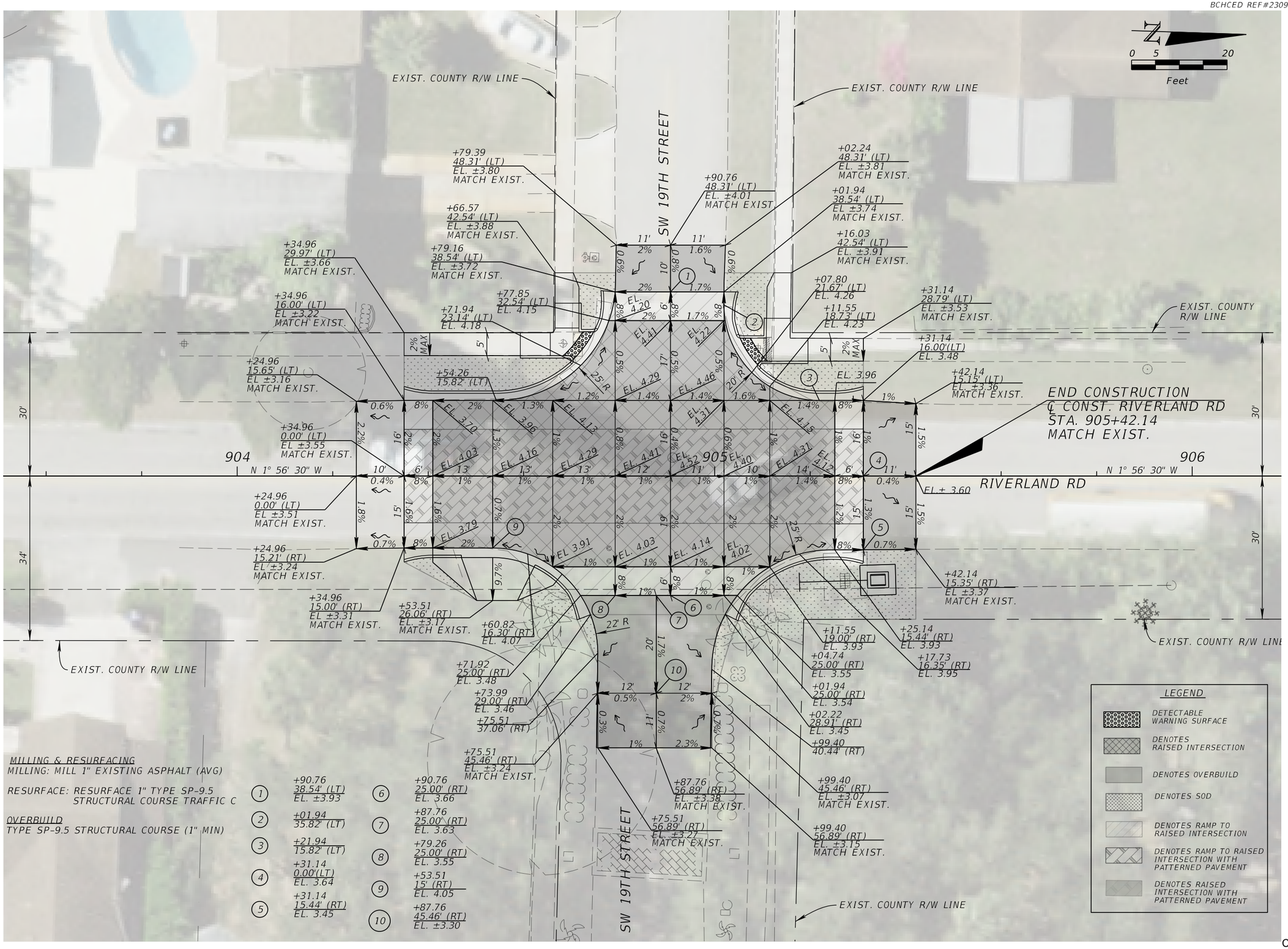
SHEET NO.	OF
21	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430\4 Riverland Rd\04318430\roadway\Grading Plans\INTDRD07.dgn
3/4/2025 4:05:04 PM
max.teddy

BCHCED REF#230914001



MILLING & RESURFACING
MILLING: MILL 1" EXISTING ASPHALT (AVG)

RESURFACE: RESURFACE 1" TYPE SP-9.5
STRUCTURAL COURSE TRAFFIC C

OVERBUILD
TYPE SP-9.5 STRUCTURAL COURSE (1" MIN)

1	+90.76 38.54' (LT) EL. ±3.93	6	+90.76 25.00' (RT) EL. 3.66
2	+01.94 35.82' (LT)	7	+87.76 25.00' (RT) EL. 3.63
3	+21.94 15.82' (LT)	8	+79.26 25.00' (RT) EL. 3.55
4	+31.14 0.00'(LT) EL. 3.64	9	+53.51 15' (RT) EL. 4.05
5	+31.14 15.44' (RT) EL. 3.45	10	+87.76 45.46' (RT) EL. ±3.30

ENGINEER:
ERIC FERGUIERO, P.E.
FEC No.86211
DATE:08/2024

ADD: 1800 NEKTA WAY, SUITE 200
FORT LAUDERDALE, FL 33311
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE: 08/2024
MT	
DESIGNED BY: MT	SCALE: AS SHOWN
CHECKED BY: BK	FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY (CHK'D)	DESCRIPTION

PROJECT #12598

INTERSECTION DETAIL

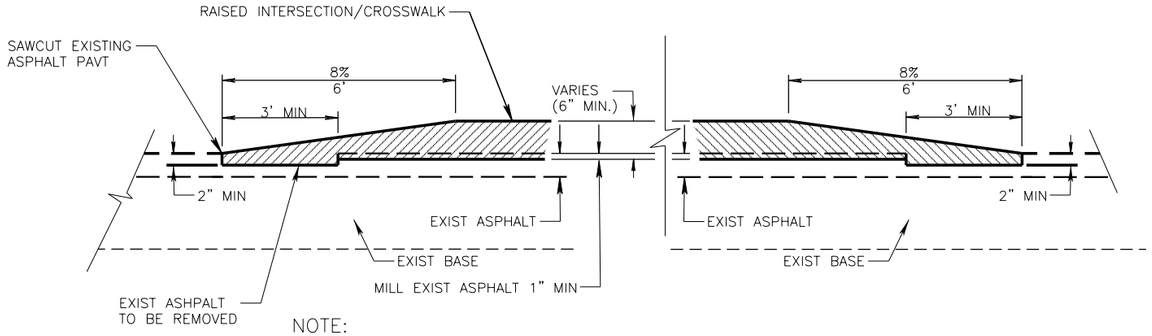
SHEET NO.	OF
22	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304_Riverland Rd\roadway\Grading Plans\INTDRD08.dgn
3/4/2025 4:05:10 PM
max.teddy

BCHCED REF#230914001

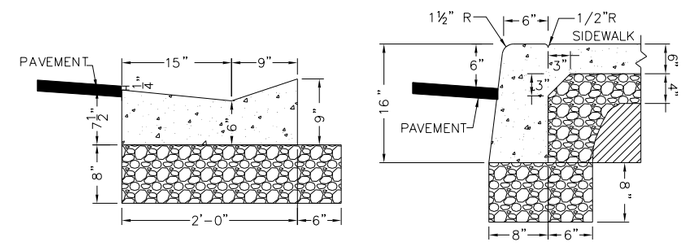


KHA

NOTE:

THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT WILL BE CONNECTED TO EXISTING PAVEMENT.

TYPICAL RAISED INTERSECTION
BUTT JOINT DETAIL
NOT TO SCALE



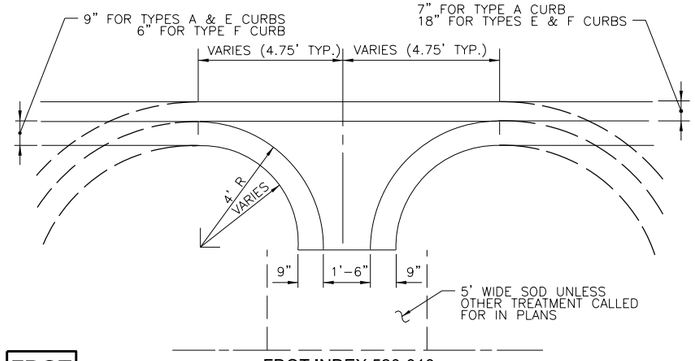
CURB PAD DETAIL
NOT TO SCALE

FTL

NOTE:

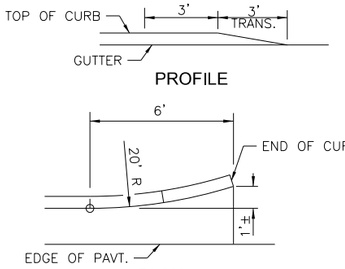
1. ALL CURBS MUST HAVE AN 8" THICK MINIMUM STABILIZED LIMEROCK BASE, COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.
2. ALL CONCRETE STRENGTH TO BE 3000 P.S.I.
3. LIMEROCK BASES SHALL BE CONSTRUCTED IN LIFTS NOT TO EXCEED SIX (6) INCHES.

* COST OF 16" CURB WITH SIDEWALK TO BE INCLUDED IN CONCRETE DRIVEWAYS AND SIDEWALK, 6" THICK



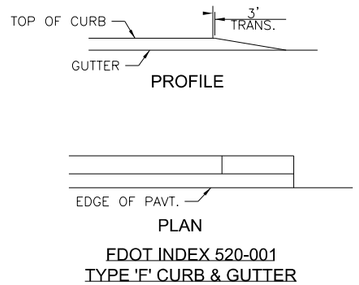
FDOT

FDOT INDEX 520-010
MEDIAN OPENING FLUME DETAIL
NOT TO SCALE



FDOT

FDOT INDEX 520-001
TYPE 'F' CURB & GUTTER
FLARED TRANSISTION
NOT TO SCALE



FDOT

FDOT INDEX 520-001
TYPE 'F' CURB & GUTTER
STRAIGHT TRANSISTION
NOT TO SCALE

FTL	CITY OF FORT LAUDERDALE STANDARD DETAIL
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION DETAIL
KHA	KIMLEY-HORN AND ASSOCIATES DETAIL

ENGINEER:
ERIC FERGUSERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1920 PALM AVE, SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY DETAILS

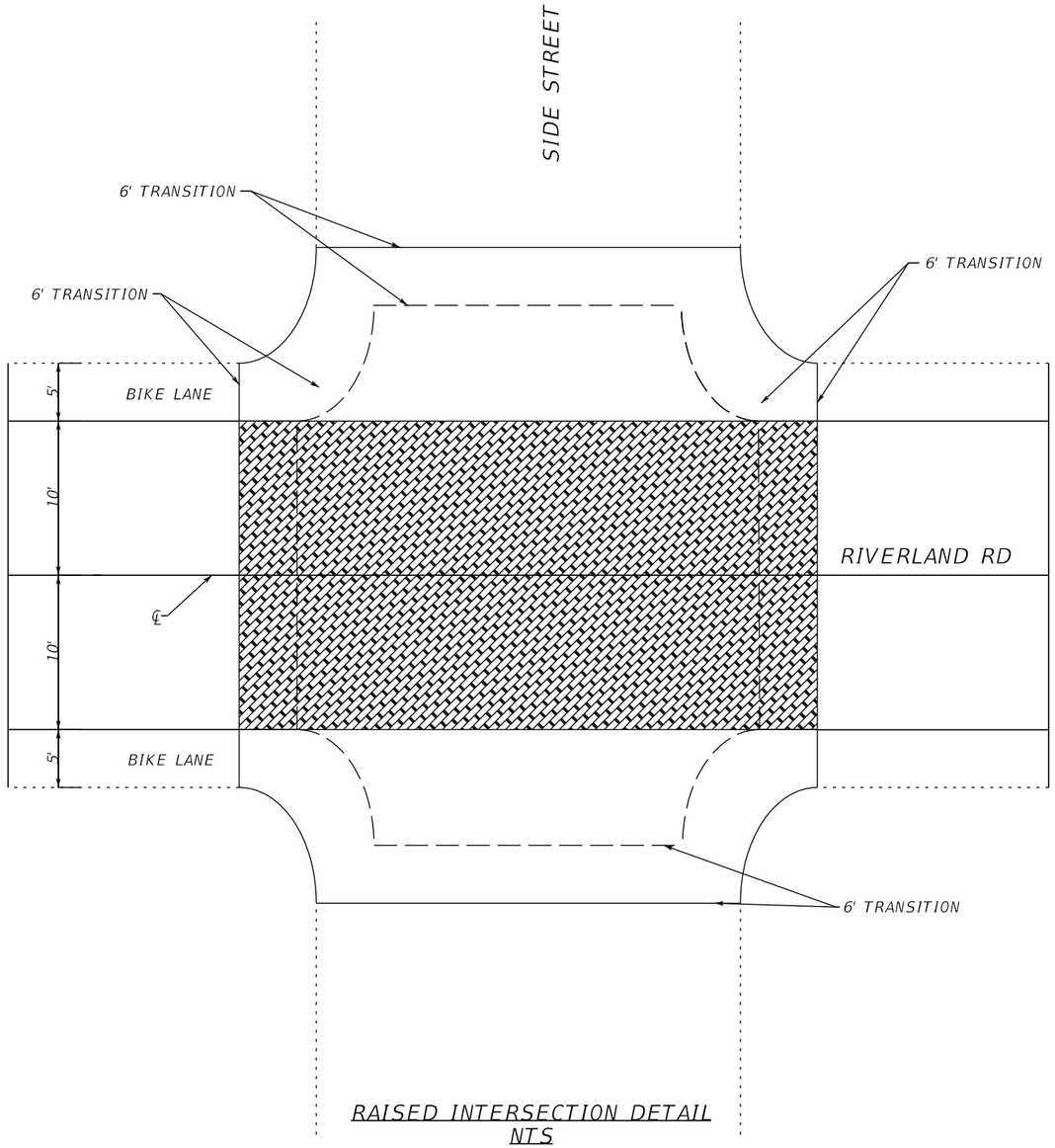
SHEET NO.	OF
23	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\SPDTRD01.dgn 4:05:16 PM 3/4/2025 max.teddy

BCHCED REF#230914001



RAISED INTERSECTION DETAIL
NTS

NOTES:
1. USE THIS DETAIL AT THE FOLLOWING INTERSECTIONS:
   A. SW 35TH AVE (GULFSTREAM LN)
   B. RIVERLANE TERRACE
   C. SW 27TH AVE / WATERSIDE DR
   D. SW 21ST ST
   E. SW 19TH ST

DENOTES PATTERNED PAVEMENT

ENGINEER:
ERIC FERGUSERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 PENNA WAY, SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0885
FAX: 561-863-8175

DRAWN BY: MT
DATE: 08/2024
DESIGNED BY: MT
SCALE: AS SHOWN
CHECKED BY: BK
FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

ROADWAY DETAILS

SHEET NO.	OF
24	38

TOTAL: 38
CAD FILE:
DRAWING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\roadway\SPDTRD02.dgn
3/4/2025 4:05:18 PM
max.teddy

BCHCED REF#230914001

EXIST. CITY R/W LINE

INSTALL W11-2 & W16-7PL SIGNS WITH RRFBs PER FDOT INDEX 654-001 STA. 810+00.00 1 AS
0654 2 27

INSTALL W11-2 & W16-7PL SIGNS WITH RRFBs PER FDOT INDEX 654-001 STA. 810+00.00 1 AS
0654 2 27

R1-5L (36"X36") STA. 810+40.00 1 EA
0700 1 111

REMOVE EXIST. SIGN
0700 1 600

REMOVE EXIST. SIGN
0700 1 600

EXIST. R3-17 (TO REMAIN)

EXIST. SIGNS (TO REMAIN)

12" WHITE (TYP)
6" YELLOW (TYP)
TYPE F RPM
REMOVE EXIST PAVEMENT MARKINGS

OM1-1 (18"X18") 1 EA
0705 10 1

R4-7 (24"X30") STA. 809+67.00 1 EA
0700 1 111

6" DBL YELLOW W Y/Y RPM'S @ 40' O.C. (TYP)

TYPE F RPM
TYPE F RPM
REMOVE EXIST. 24" WHITE
REMOVE EXIST. BICYCLE PAVEMENT MARKING
6" WHITE (TYP)
TYPE F RPM
18" YELLOW (TYP)
6" YELLOW (6'-10' SKIP)
6" YELLOW (TYP) (TO REMAIN)
REMOVE EXIST. CROSSWALK MARKINGS
Y/Y RPM'S @ 12" PER BCTED DETAILS (TYP.)
MEDIAN NOSE PER BCTED DETAILS (TYP)
6" WHITE (TYP) (TO REMAIN)
EXIST. CITY R/W LINE
EXIST. CITY R/W LINE
TYPE F RPM
6" WHITE (2'-4' SKIP) (TYP)
24" PREFORMED WHITE (TYP)
TYPE F RPM
6" WHITE (TYP)
6" DBL YELLOW W Y/Y RPM'S @ 10' O.C. (TYP)
TYPE F RPM
YIELD LINE PER FDOT INDEX 711-001 (TYP)

℄ CONST. RIVERLAND ROAD
RIVERLAND ROAD
808
809
810
811
812
+55 MATCH EXIST.
+80
+89
+67
+90
+37
+00
+39
+60
+80
+87
+12 MATCH EXIST.
40'
50'
4' R
7' R
5'
10'

0 10 40
Feet

BEGIN PROJECT
BEGIN SIGNING & PAVEMENT MARKINGS
℄ CONST. STA 808+54.64

EXIST. W11-2, W16-9P (TO REMAIN)

R1-5L (36"X36") STA. 809+39.00 1 EA
0700 1 111

INSTALL W11-2 & W16-7PL SIGNS WITH RRFBs PER FDOT INDEX 654-001 STA. 809+90.16 1 AS
0654 2 27

INSTALL W11-2 & W16-7PL SIGNS WITH RRFBs PER FDOT INDEX 654-001 STA. 809+90.28 1 AS
0654 2 27

REMOVE EXIST. SIGN
0700 1 60

REMOVE EXIST. SIGN
0700 1 600

R4-7 (24"X30") OM1-1 (18"X18") STA. 810+34.00 1 EA
0700 1 111

OM1-1 (18"X18") 1 EA
0705 10 1

EXIST. TOW-AWAY ZONE SIGN (TO REMAIN)

EXIST. SIGN (TO REMAIN)

EXIST. R3-17 (TO REMAIN)

REMOVE EXIST. SIGN
0700 1 600

EXIST. SIGN (TO REMAIN)

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

PAVEMENT MARKINGS LEGEND

GREEN BIKE LANE PAVEMENT MARKING PER SIGNING AND PAVEMENT MARKING DETAILS

ENGINEER:
ERIC FERGUERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 NEBTA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DATE: 08/2024
DESIGNED BY: MT | SCALE: AS SHOWN
CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO. 25 | OF 38
TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318304_Riverland Rd\04318304\signing\Plan\PLANSP01.dgn 3/4/2025 4:05:55 PM max.teddy

BCHCED REF#230914001

CITY OF FORT LAUDERDALE R/W

BROWARD COUNTY R/W

W17-1 (30"X30")
W13-1 (18"X18")
STA. 816+33.00
1 EA
0700 1 111

816

EXIST. CITY R/W LINE

6" WHITE (TYP)
(TO REMAIN)

20 MPH
SPEED HUMP

EXIST. CITY R/W LINE

6" DBL YELLOW Y/Y
RPM'S 40' O.C. (TYP)
(TO REMAIN)

EXISTING SIGNS
(TO REMAIN)

STOP
Riverland Rd
Riverland Rd

12" WHITE (TYP)
(TO REMAIN)

BICYCLE PAVEMENT
MARKING
(TO REMAIN)

817 RIVERLAND ROAD

RIVERLAND ROAD

6" WHITE (2'-4' SKIP) (TYP)
(TO REMAIN)

24" PREFORMED WHITE (TYP)

12" WHITE (TYP)

6" WHITE (TYP)
TYPE F RPM

6" YELLOW
(6'-10' SKIP)

EXIST. SIGN
(TO REMAIN)

RELOCATE
EXIST. SIGNS
STA. 818+68.00
0700 1 500

STOP HERE ON RED

EXIST. SIGN
(TO REMAIN)

818 +34
MATCH EXIST.

+88
MATCH EXIST.

819

820

821

6" YELLOW (TYP)
(TO REMAIN)

℄ CONST. RIVERLAND ROAD

W17-1 (30"X30")
W13-1 (18"X18")
STA. 819+60.00
1 EA
0700 1 111

SPEED HUMP
20 MPH

EXIST. SIGNS
(TO REMAIN)

20 MPH

N

0 10 40
Feet

SPEED HUMP PAVEMENT
MARKING PER FDOT
INDEX 711-001 (TYP)
TYPE F RPM

REMOVE EXIST. BICYCLE
PAVEMENT MARKING

10' 5' 10' 5'

A B C D

+80 +00

6" WHITE (TYP)
(TO REMAIN)

6" DBL YELLOW
Y/Y RPM'S @ 40' O.C.
TYPE F RPM

REMOVE EXIST.
CROSSWALK MARKINGS

6" WHITE

EXIST. COUNTY R/W LINE

HO HO HO HO

EXIST. CITY R/W LINE

AHEAD

W11-2 (30"X30")
W16-9P (24"X12")
STA. 817+54.00
1 EA
0700 1 111

TORTUGAS LANE

Tortugas Ln
Riverland Rd
STOP

24" WHITE
(TYP)
(TO REMAIN)

NO TURN
WHEN PEDESTRIANS IN CROSSWALK

EXIST. SIGNS
(TO REMAIN)

6" DBL YELLOW
Y/Y RPM'S @ 40' O.C. (TYP)
(TO REMAIN)

12" WHITE (TYP)
(TO REMAIN)

RELOCATE EXIST. SIGNS
STA. 818+54.00
0700 1 500

EXIST. SIGN
(TO REMAIN)

DEAD END

SUGARLOAF LANE

PAVEMENT MARKINGS LEGEND

GREEN BIKE
LANE PAVEMENT MARKING
PER SIGNING AND PAVEMENT
MARKING DETAILS

Ⓐ +64
Ⓑ +52
Ⓒ +64
Ⓓ +53

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY.

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

ENGINEER:
ERIC FERGUIERO, P.E.
ERIC No.86211
DATE:08/2024

ADD: 1800 NEKTA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY:		
MT		
CHECKED BY:		
BK		
FIELD BOOK:		

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS			
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.	OF
26	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430\4_Riverland Rd\04318430\4\Signing\Plan\PLANSP02.dgn 3/4/2025 4:06:11 PM max.teddy

BCHCED REF#230914001

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

SW 34TH WAY

0 10 40 N Feet

SW 35TH AVENUE

RIVERLAND ROAD

835 836 837 838 839 840

+34 72' (LT) MATCH EXIST.

6" DBL YELLOW Y/Y RPM'S @ 40' O.C.

EXIST. SIGN (TO REMAIN) SPEED LIMIT 30

RELOCATE EXIST. SIGN TO STA. 836+11.00

6" DBL YELLOW Y/Y RPM'S @ 40' O.C. (TYP) (TO REMAIN)

RELOCATE EXIST. SIGNS STA. 837+14.00 0700 1 500

EXIST. SIGN (TO REMAIN) STOP Riverland Rd SW 35 AV

EXIST. SIGN (TO REMAIN) BIKE LANE

EXIST. SIGN (TO REMAIN) NO THRU TRUCKS

EXIST. SIGN (TO REMAIN) END SCHOOL ZONE

SPEED LIMIT 30 YOUR SPEED XX

+35 45' (LT)

W17-1 (30"X30") W16-7PL (24"X12") STA. 838+63.00 1 EA 0700 1 111

SPEED HUMP

EXIST. SIGNS (TO REMAIN) STOP Riverland Rd SW 34 WAY

W17-1 (30"X30") W13-1 (18"X18") STA. 840+18.00 1 EA 0700 1 111

SPEED HUMP 20 MPH

R2-1 (24"X30") & SOLAR-POWERED ELECTRONIC SPEED FEEDBACK SIGN STA. 836+11.00 1 EA RELOCATED FROM STA. 838+55.00 0700 142 802

SPEED LIMIT 30 YOUR SPEED XX

EXIST. COUNTY R/W LINE

6" WHITE (TYP) (TO REMAIN)

6" YELLOW (TYP) (TO REMAIN)

6" WHITE (2'-4' SKIP) (TYP) (TO REMAIN)

+58 MATCH EXIST.

+14 +52 +66 +86

12' 11' 6' 4' 10' 10' 5'

TYPE F RPM

6" YELLOW (6'-10' SKIP)

BLUE/BLUE RPM

+74 MATCH EXIST.

¢ CONST. RIVERLAND ROAD

+80 +04

SCHOOL

6" YELLOW (TYP) (TO REMAIN)

6" WHITE (TYP) (TO REMAIN)

24" WHITE (TYP) SCHOOL ZONE PAVEMENT MARKING PER FDOT INDEX 711-001 (TYP)

+37 24" PREFORMED WHITE (TYP) BLUE/BLUE RPM +56

+18 +42 +02

6" WHITE (TYP)

6" WHITE (2'-4' SKIP) (TYP)

SPEED HUMP PAVEMENT MARKING PER FDOT INDEX 711-001 (TYP)

12" WHITE (TYP)

AHEAD

DEAD END

+82 39' (RT)

EXIST. SIGN (TO REMAIN)

EXIST. SIGN (TO REMAIN)

24" WHITE (TYP)

6" DBL YELLOW Y/Y RPM'S @ 40' O.C. (TYP)

+82 89' (RT) MATCH EXIST.

11' 10'

SW 35TH AVE (GULFSTREAM LN)

Gulfstream Ln Riverland Rd STOP

RELOCATE EXIST. SIGNS STA. 837+99.30 0700 1 500

SCHOOL SPEED LIMIT 15 FRI 7:30 AM - 4:30 PM

RELOCATE EXIST. SIGNS STA. 838+80.00 0700 1 500

EXIST. COUNTY R/W LINE

REMOVE EXIST. BICYCLE PAVEMENT MARKING

REMOVE SCHOOL ZONE PAVEMENT MARKING

W17-1 (30"X30") W16-7PR (24"X12") STA. 838+83.00 1 EA 0700 1 111

SPEED HUMP

EXIST. SIGNS (TO REMAIN)

W17-1 (30"X30") W13-1 (18"X18") STA. 836+00.00 1 EA 0700 1 111

SPEED HUMP 20 MPH

W17-1 (30"X30") W16-7PL (24"X12") STA. 837+01.00 1 EA 0700 1 111

SPECIAL EMPHASIS CROSSWALK MARKINGS PER BCTED DETAILS (TYP)

PAVEMENT MARKINGS LEGEND

GREEN BIKE LANE PAVEMENT MARKING PER SIGNING & PAVEMENT MARKING DETAILS

ENGINEER: ERIC FERGUEIRO, P.E. FL REG. No.86211 DATE: 08/2024

ADD: 1800 NEKOVA WAY, SUITE 200 FORT LAUDERDALE, FL 33311 TEL: 561-845-0855 FAX: 561-863-8175

DRAWN BY: MT | DATE: 08/2024 | DESIGNED BY: MT | SCALE: AS SHOWN | CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.	OF
27	38

TOTAL: 38

CAD FILE:

SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304_sig\Plan\PLANSP03.dgn 3/4/2025 4:06:28 PM max.teddy

BCHCED REF#230914001

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

SW 33RD TERRACE

EXIST. SIGN (TO REMAIN) — END SCHOOL ZONE

EXIST. SIGN (TO REMAIN) — BUS STOP 9 ID# 1769

EXIST. SIGNS (TO REMAIN)

REMOVE EXIST. CROSSWALK MARKINGS

6" DBL YELLOW (TYP)

6" WHITE (TYP) (TO REMAIN)

6" YELLOW (TYP) (TO REMAIN)

+27 MATCH EXIST.

+41

+59 MATCH EXIST.

+53

EXIST. CITY R/W LINE

TYPE F RPM

SPEED HUMP PAVEMENT MARKING PER FDOT INDEX 711-001 (TYP)

W17-1 (30"X30")
W13-1 (18"X18")
STA. 874+93.00
1 EA
0700 1 111

SPEED HUMP — 20 MPH

EXIST. SIGN (TO REMAIN)

0 10 40
Feet

850 851 852 853 854 855

RIVERLAND ROAD

℄ CONST. RIVERLAND ROAD

BICYCLE PAVEMENT MARKING (TO REMAIN)

12" WHITE (TYP)

6" WHITE (TYP)

6" WHITE (TYP) (TO REMAIN)

6" YELLOW (TYP) (TO REMAIN)

12" WHITE (TYP)

TYPE F RPM

6" WHITE (TYP)

24" PREFORMED WHITE (TYP)

EXIST. CITY R/W LINE

EXIST. CITY R/W LINE

WHEN FLASHING — SCHOOL — SPEED LIMIT 15

EXIST. SIGNS (TO REMAIN)

SPEED HUMP — 20 MPH

W17-1 (30"X30")
W13-1 (18"X18")
STA. 850+69.00
1 EA
0700 1 111

DEAD END

EXIST. SIGN (TO REMAIN)

BIMINI LANE — Riverland Rd — STOP

SCHOOL — SPEED LIMIT 15 — 8:00 - 9:30 4:00 - 4:30

EXIST. SIGNS (TO REMAIN)

RELOCATE EXIST. SIGNS
STA. 852+40.00
0700 1 500

BEGIN RIGHT TURN LANE — YIELD TO BIKES

EXIST. SIGN (TO REMAIN)

DEAD END

EXIST. SIGN (TO REMAIN)

ANDROS LANE — Riverland Rd — STOP

EXIST. SIGNS (TO REMAIN)

SW 32 ND TERR./ BIMINI LANE

ANDROS LANE

ENGINEER:
ERIC FERGUEIRO, P.E.
ERIC. No:86211
DATE:08/2024

ADD: 1800 NEKTA WAY, SUITE 200
FORT LAUDERDALE, FL 33311
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DESIGNED BY:	CHECKED BY:	DATE:	SCALE:	FIELD BOOK:
MT	MT	BK	08/2024	AS SHOWN	

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS			
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.	OF
28	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

max.leddy 3/4/2025 4:06:34 PM K:\WPB_Design\043184304_Riverland Rd\043184304's signing\Plan\PLANSP04.dgn

BCHCED REF#230914001

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

N

0 10 40
Feet

SW 29TH AVENUE

871 872 873 874 875 876

RIVERLAND ROAD

℄ CONST. RIVERLAND ROAD

RIVERLANE TERRACE

EXIST. CITY R/W LINE

REMOVE EXIST. BICYCLE PAVEMENT MARKING

RELOCATE PRIVATE SIGN
0700 1 500

6" WHITE (TYP) (TO REMAIN)

6" YELLOW (TYP) (TO REMAIN)

6" WHITE (2'-4' SKIP) (TYP) (TO REMAIN)

6" WHITE

6" WHITE (2'-4' SKIP)

6" WHITE (TYP.)

6" DBL YELLOW Y/Y RPM'S @ 40' O.C. (TYP)

TYPE F RPM

SPEED HUMP PAVEMENT MARKING PER FDOT INDEX 711-001 (TYP)

6" YELLOW (TYP) (TO REMAIN)

6" WHITE (TYP) (TO REMAIN)

24" WHITE

+70 +80 MATCH EXIST. +90 +97 +97 +81 +92 MATCH EXIST. +75 +40 31' (RT) +05 +75 +85 +19 76' (RT) MATCH EXIST.

W17-1 (30"X30")
W16-7PL (24"X12")
STA. 873+80.00
1 EA
0700 1 111

W17-1 (30"X30")
W13-1 (18"X18")
STA. 874+93.00
1 EA
0700 1 111

W17-1 (30"X30")
W13-1 (18"X18")
STA. 871+72.00
1 EA
0700 1 111

W17-1 (30"X30")
W16-7PL (24"X12")
STA. 872+91.00
1 EA
0700 1 111

RELOCATE EXIST. SIGNS
STA. 873+57.33
0700 1 500

EXIST. SIGN (TO REMAIN)

EXIST. SIGNS (TO REMAIN)

EXIST. SIGNS (TO REMAIN)

PAVEMENT MARKINGS LEGEND

GREEN BIKE LANE PAVEMENT MARKING PER SIGNING AND PAVEMENT MARKING DETAILS

ENGINEER:
ERIC FERGUERO, P.E.
REG. No.86211
DATE: 08/2024

ADD: 1800 NEBRA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-645-0855
FAX: 561-883-8175

DRAWN BY: MT | DATE: 08/2024
DESIGNED BY: MT | SCALE: AS SHOWN
CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.	OF
29	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\Signing\Plan\PLANSP05.dgn
4:06:50 PM
3/4/2025
max.teddy

BCHCED REF#230914001

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

N

0 10 40
Feet

SW 27TH TERRACE

EXIST. SIGN TO BE RELOCATED FROM STA. 889+21.37 TO STA. 887+15.00
1 EA
0700 1 500

BIKE LANE

EXIST. CITY R/W LINE

REMOVE EXIST. BICYCLE PAVEMENT MARKING
BLUE/BLUE RPM
TYPE F RPM

6" DBL YELLOW Y/Y RPM'S @ 40' O.C. (TYP)

TYPE F RPM

886 ℄ CONST. RIVERLAND ROAD 887 RIVERLAND ROAD 888 889 890 8

MATCH LINE STA 891+00.00

W17-1 (30"X30")
W16-7PL (24"X12")
STA. 889+08.00
1 EA
0700 1 111

SPEED HUMP

RELOCATE EXIST. SIGN STA. 889+21.37

W17-1 (30"X30")
W13-1 (18"X18")
STA. 890+09.00
1 EA
0700 1 111

SPEED HUMP
20 MPH

+38
+58
+86
+35
+24
MATCH EXIST.
+09
+29
+91
MATCH EXIST.
+33
+86
+56
34' (RT)
+34
78' (RT)
MATCH EXIST.

6" WHITE (2'-4' SKIP) (TYP)
(TO REMAIN)

6" WHITE (2'-4' SKIP)
TYPE F RPM
6" WHITE (TYP)
24" WHITE

6" WHITE (TYP) (TO REMAIN)
6" YELLOW (TYP) (TO REMAIN)

REMOVE EXIST. BICYCLE PAVEMENT MARKING

EXIST. CITY R/W LINE

EXIST. SIGNS (TO REMAIN)

EXIST. SIGN (TO REMAIN)

EXIST. SIGNS (TO REMAIN)

EXIST. SIGN (TO REMAIN)
20 MPH
SPEED HUMP

W17-1 (30"X30")
W13-1 (18"X18")
STA. 887+05.00
1 EA
0700 1 111

W1-8L (18"X24")
STA. 887+60.00
1 EA
0700 1 111

W1-8R (18"X24")
STA. 887+60.00
1 EA
0700 1 111

SPEED HUMP PAVEMENT MARKING PER FDOT INDEX 711-001 (TYP)

DEAD END

EXIST. SIGN (TO REMAIN)

6" DBL YELLOW Y/Y RPM'S @ 40" O.C. (TYP)

Riverland Rd

STOP

RELOCATE EXIST. SIGNS
STA. 888+69.94
1 EA
0700 1 500

EXIST. CITY R/W LINE

SPEED HUMP

W17-1 (30"X30")
W16-7PL (24"X12")
STA. 888+14.00
1 EA
0700 1 111

SW 27TH AVENUE/ WATERSIDE DRIVE

PAVEMENT MARKINGS LEGEND

GREEN BIKE LANE PAVEMENT MARKING PER SIGNING AND PAVEMENT MARKING DETAILS

ENGINEER:
ERIC FERGUIERO, P.E.
ERIC. No.86211
DATE:08/2024

ADD: 1800 NEWTON AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY:		
MT		
CHECKED BY:		
BK		
FIELD BOOK:		

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.	OF
30	38
TOTAL: 38	
CAD FILE:	
SIGNING FILE NO.	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\Signing\Plan\PLANSP06.dgn 3/4/2025 4:07:07 PM max.teddy

BCHCED REF#230914001

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

ENGINEER:
ERIC FEGLIBERO, P.E.
FES No.86211
DATE:08/2024

ADD: 1800 NEWTON AVE. SUITE 200
FORT LAUDERDALE, FL 33311
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE:	SCALE:
MT	08/2024	AS SHOWN
DESIGNED BY:	CHECKED BY:	FIELD BOOK:
MT	BK	

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS			
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.	OF
31	38
TOTAL: 38	
CAD FILE:	
DRAWING FILE NO.	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\Signing\Plan\PLANSP07.dgn
3/4/2025 4:07:24 PM max.teddy

BCHCED REF#230914001

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

N

0 10 40
Feet

MATCH LINE STA 896+00.00

MATCH LINE STA 901+00.00

EXIST. COUNTY R/W LINE

EXIST. SIGN TO BE RELOCATED FROM STA. 899+51.13 TO STA. 897+85.97 1 EA
0700 1 500

W17-1 (30"X30")
W16-7PL (24"X12")
STA. 899+27.00
1 EA
0700 1 111

W17-1 (30"X30")
W13-1 (18"X18")
STA. 900+30.00
1 EA
0700 1 111

RELOCATE EXIST. SIGN STA. 899+51.13

TYPE F RPM

EXIST. SIGN (TO REMAIN)

REMOVE EXIST. BICYCLE PAVEMENT MARKING

6" WHITE (TYP) (TO REMAIN)

6" DBL YELLOW Y/Y RPM'S @ 40' O.C. (TYP) (TO REMAIN)

6" WHITE (2'-4' SKIP) (TYP) (TO REMAIN)

6" WHITE (TYP)

6" WHITE (2'-4' SKIP)

6" DBL YELLOW (TYP)

6" YELLOW (TYP) (TO REMAIN)

RIVERLAND ROAD

℄ CONST. RIVERLAND ROAD

MATCH EXIST.

SPEED HUMP PAVEMENT MARKING PER FDOT INDEX 711-001 (TYP)

REMOVE EXIST. BICYCLE PAVEMENT MARKING

EXIST. COUNTY R/W LINE

W1-8L (18"X24")
STA. 897+50.00
1 EA
0700 1 111

W17-1 (30"X30")
W13-1 (18"X18")
STA. 897+66.00
1 EA
0700 1 111

RELOCATE EXIST. SIGNS STA. 898+86.00 1 EA
0700 1 500

+00 79' (RT) MATCH EXIST

W17-1 (30"X30")
W16-7PL (24"X12")
STA. 898+66.00
1 EA
0700 1 111

SW 21ST STREET

24" WHITE

SW 21 ST

Riverland Rd

STOP

RELOCATE EXIST. SIGNS STA. 899+13.22 1 EA
0700 1 500

EXIST. SIGN (TO REMAIN)

EXIST. SIGN (TO REMAIN)

6" DBL YELLOW Y/Y RPM'S @ 40' O.C. (TYP)

PAVEMENT MARKINGS LEGEND

GREEN BIKE LANE PAVEMENT MARKING PER SIGNING AND PAVEMENT MARKING DETAILS

ENGINEER:
ERIC FERGUERO, P.E.
FEC No.86211
DATE: 08/2024

ADD: 1800 NEBRA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

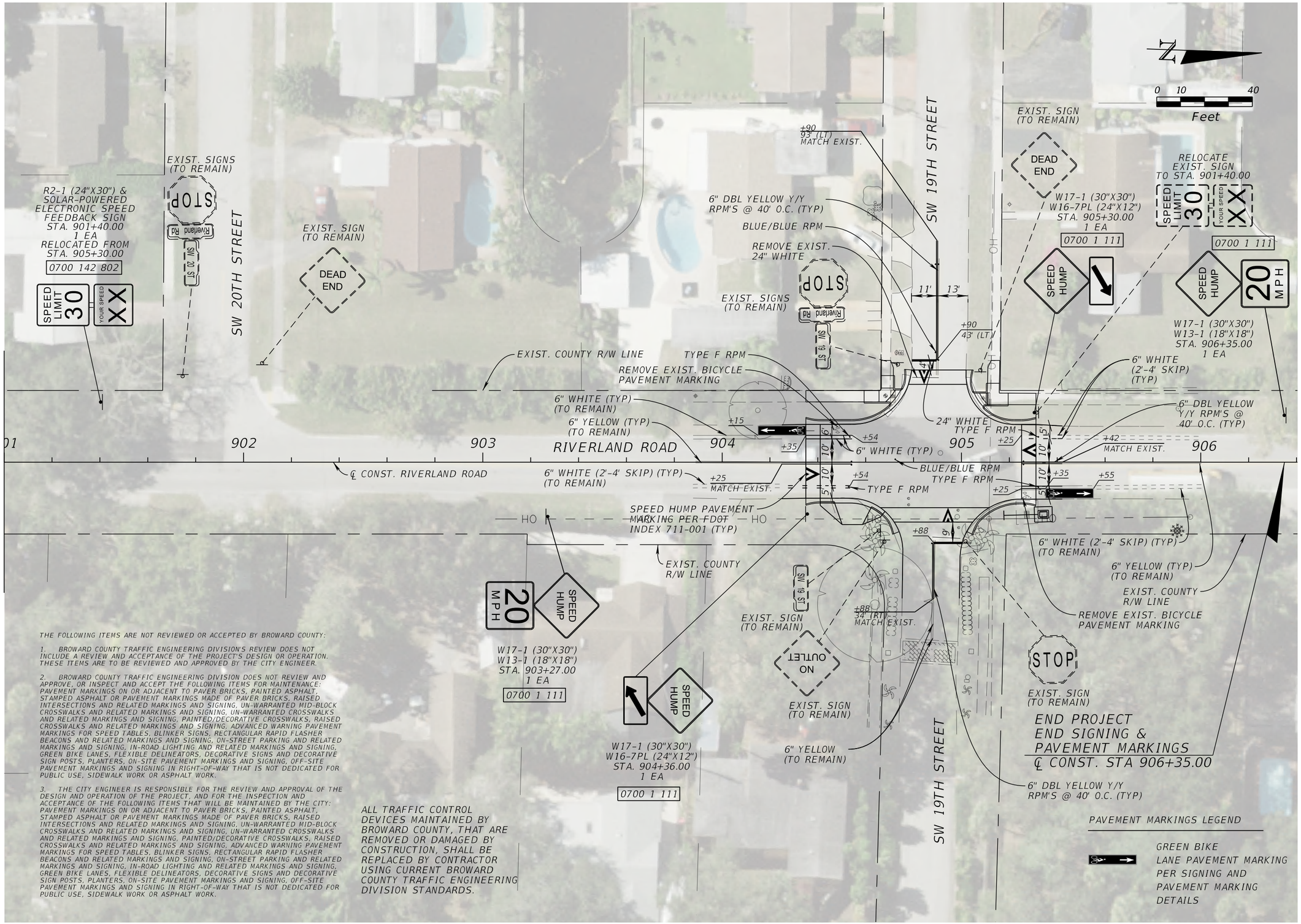
SHEET NO.	OF
32	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304_sigsht.dgn 3/4/2025 4:07:38 PM max.teddy

BCHCED REF#230914001



THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

1. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.

2. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

3. THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.

ALL TRAFFIC CONTROL DEVICES MAINTAINED BY BROWARD COUNTY, THAT ARE REMOVED OR DAMAGED BY CONSTRUCTION, SHALL BE REPLACED BY CONTRACTOR USING CURRENT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS.

ENGINEER:
ERIC FEGLEIRO, P.E.
REG. No.66211
DATE: 08/2024

ADD: 1900 RENAIA WAY, SUITE 200
PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DESIGNED BY: MT | CHECKED BY: BK | DATE: 08/2024 | SCALE: AS SHOWN | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

REVISIONS

PROJECT #12598

SIGNING AND PAVEMENT MARKING PLAN

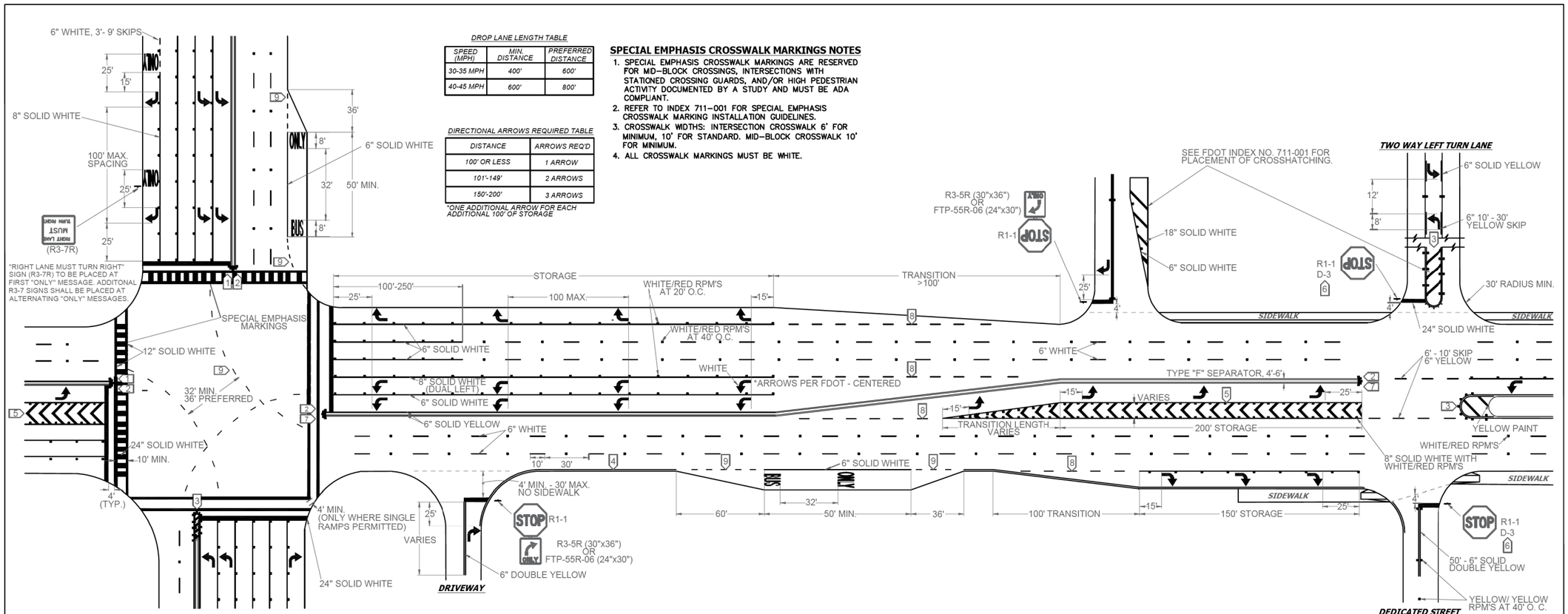
SHEET NO.	OF
33	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430 4_Riverland Rd\04318430 4\signing\Plan\PLANSP09.dgn 3/4/2025 4:07:50 PM max.teddy

BCHCED REF#230914001



DROP LANE LENGTH TABLE

SPEED (MPH)	MIN. DISTANCE	PREFERRED DISTANCE
30-35 MPH	400'	600'
40-45 MPH	600'	800'

DIRECTIONAL ARROWS REQUIRED TABLE

DISTANCE	ARROWS REQ'D
100' OR LESS	1 ARROW
101'-149'	2 ARROWS
150'-200'	3 ARROWS

*ONE ADDITIONAL ARROW FOR EACH ADDITIONAL 100' OF STORAGE

SPECIAL EMPHASIS CROSSWALK MARKINGS NOTES

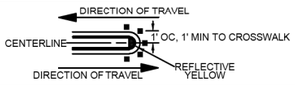
1. SPECIAL EMPHASIS CROSSWALK MARKINGS ARE RESERVED FOR MID-BLOCK CROSSINGS, INTERSECTIONS WITH STATIONED CROSSING GUARDS, AND/OR HIGH PEDESTRIAN ACTIVITY DOCUMENTED BY A STUDY AND MUST BE ADA COMPLIANT.
2. REFER TO INDEX 711-001 FOR SPECIAL EMPHASIS CROSSWALK MARKING INSTALLATION GUIDELINES.
3. CROSSWALK WIDTHS: INTERSECTION CROSSWALK 6' FOR MINIMUM, 10' FOR STANDARD. MID-BLOCK CROSSWALK 10' FOR MINIMUM.
4. ALL CROSSWALK MARKINGS MUST BE WHITE.

NOTES

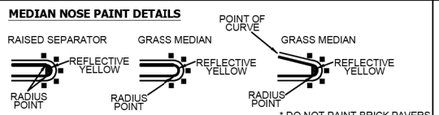
1. ALL PAVEMENT MARKINGS SHALL BE ALKYD BASED THERMOPLASTIC AND FULLY RETROREFLECTORIZED.
2. ALL PAVEMENT MARKINGS ON PAVER SYSTEMS SHALL BE 3M 380/381 SERIES TAPE OR EQUIVALENT AND APPLIED WITH P60 ADHESIVE AS PER MANUFACTURERS SPECIFICATIONS.
3. ALL PAVEMENT MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", BCTED STANDARDS, AND FDOT DESIGN STANDARDS.
4. SEE FDOT INDEX NO 706-001 FOR PLACEMENT OF RPM's (FOR BULLNOSE RPM TREATMENT, SEE LEGEND NO. 1)
5. RPM's SHALL BE CLASS "B" OR EQUIVALENT, APPLIED WITH EPOXY OR BITUMINOUS ADHESIVE.
6. FDOT APPROVED SEALER SHALL BE USED WHEN APPLYING MARKINGS ON CONCRETE.
7. FOR BIKE LANE DETAILS SEE FDOT INDEX NO. 711-002.
8. EXISTING MARKINGS SHALL BE REMOVED BY WATER BLASTING OR SAND BLASTING.
9. ALL STOP LINES TO BE 4' BEHIND CROSSWALK OR SIDEWALK.
10. PAVEMENT MARKING REFLECTIVITY SHALL BE UNIFORM ACROSS THE ENTIRE STRIPE AND SHALL HAVE A MINIMUM REFLECTIVITY READING OF 250 MILLICANDELAS FOR WHITE AND 175 MILLICANDELAS FOR YELLOW.
11. ALL PRODUCTS MUST BE ON FDOT'S APPROVED PRODUCTS LIST (APL).
12. RPMS SHALL NOT BE INSTALLED ADJACENT TO BIKE LANES.
13. LONGITUDINAL CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL CROSS STREETS ON COUNTY ROADS THAT ARE FOUR LANES OR GREATER.

LEGEND

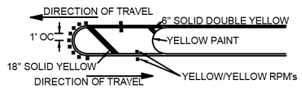
1 YELLOW/YELLOW RPM DETAILS



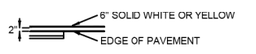
2 MEDIAN NOSE PAINT DETAILS



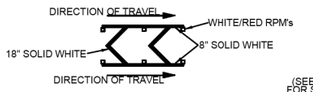
3 PAINTED MEDIAN DETAILS



4 EDGE LINE DETAILS



5 CHEVRON DETAILS - CROSSWALK AREAS AND IN FRONT OF CURB RAMPS

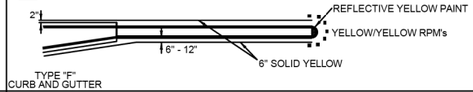


(SEE FDOT INDEX NO. 17346 FOR SPACING OF CHEVRONS)

6 STREET NAME BLADE DETAILS

SEE BCTED STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS.

7 TYPE IV SEPARATOR DETIALS



TYPE "F" CURB AND GUTTER

8 6'-10' SKIP DETAILS

6' - 10' SKIPS 6" WHITE SHALL BE USED FOR THE FOLLOWING CONDITIONS:

- TRANSITIONS AT ALL LEFT AND RIGHT TURN LANES

9 2'-4' SKIP DETAILS

2' - 4' SKIPS 6" WHITE SHALL BE USED FOR THE FOLLOWING CONDITIONS:

- RADIUS GUIDE LINES BETWEEN DUAL LEFTS TURN MOVEMENT (90' RADIUS PREFERRED OR AS NOTED ON PLANS)
- BUS BAY TRANSITIONS

STOP SIGN NOTE

WHERE SIDE ROADS INTERSECT A MULTI LANE STREET OR HIGHWAY THAT HAS A SPEED LIMIT OF 45 MPH OR HIGHER, THE MINIMUM SIZE OF THE STOP SIGNS FACING THE SIDE ROAD APPROACHES, EVEN IF THE SIDE ROAD ONLY HAS ONE APPROACH LANE, SHALL BE 36"X36".

WHERE SIDE ROADS INTERSECT A MULTI-LANE (INCLUDING TURN LANE) STREET OR HIGHWAY THAT HAS A SPEED LIMIT OF 40 MPH OR LOWER, THE MINIMUM SIZE OF THE STOP SIGN FACING THE SIDE ROAD APPROACHES SHALL BE 36"X36".

REVISIONS	
DATE	DESCRIPTION
11-24-2020	UPDATED NOTES
04-14-2021	UPDATED NOTES
05-06-2022	UPDATED NOTES

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: CARMELO CARATOZZOLO, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: CARMELO CARATOZZOLO, P.E.	

PAVEMENT MARKINGS AND SIGNS DETAILS

SHEET NO. 1 OF 1

ENGINEER: ERIC FERGUERO, P.E.
REG. No.86211
DATE: 08/2024

ADD: 1800 NEWTON AVE. SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DATE: 08/2024
DESIGNED BY: MT | SCALE: AS SHOWN
CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING DETAILS

SHEET NO.	OF
34	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

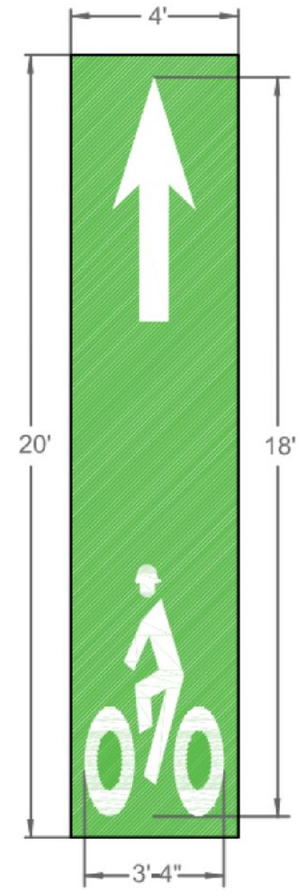
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304 signing\SPOTSP01.dgn 3/4/2025 4:08:04 PM max.leddy

BCHCED REF#230914001

*ALL BROWARD COUNTY MAINTAINED WHITE AND GREEN BICYCLE MARKING SHALL BE WHITE PREFORMED THERMOPLASTIC SYMBOLS, INCLUDING ARROWS, WITH A GREEN PREFORMED THERMOPLASTIC BACKGROUND.

GREEN BICYCLE LANE
PAVEMENT MARKING
N.T.S.



NOTES

1. THE PREFORMED THERMOPLASTIC MARKINGS SHALL MEET STATE SPECIFICATIONS AND BE APPROVED FOR USE BY THE APPROPRIATE MAINTAINING AGENCY. GREEN AND WHITE PREFORMED THERMOPLASTIC MARKINGS MUST BE ON THE FDOT APL. SPECIFICATION 523 FOR GREEN AND 711 FOR WHITE PREFORMED THERMOPLASTIC MARKINGS.

2. THE SURFACE OF THE PREFORMED THERMOPLASTIC MATERIAL SHALL CONTAIN FACTORY APPLIED NON-SKID MATERIAL WITH A MINIMUM HARDNESS OF 8 (MOHS SCALE). UPON APPLICATION THE MATERIAL SHALL PROVIDE A MINIMUM SKID RESISTANCE VALUE OF 60 BPN WHEN TESTED ACCORDING TO ASTM E 303.

3. THE MATERIAL MUST BE APPLIED AT A MINIMUM THICKNESS OF 90 MILS (2.29 MM) OR 125 MILS (3.15 NUN).

4. THE MATERIAL MUST CONTAIN A MINIMUM OF THIRTY PERCENT (30%) INTERMIXED GRADED GLASS BEADS BY WEIGHT. THE INTERMIXED BEADS SHALL BE CLEAR AND TRANSPARENT. NO MORE THAN TWENTY PERCENT (20%) SHALL CONSIST OF IRREGULAR FUSED SPHEROIDS OR SILICA.

5. THE MATERIALS SHALL BE APPLIED USING THE PROPANE TOUCH METHOD RECOMMENDED BY THE MANUFACTURER. THE MATERIAL MUST BE APPLIED WITHOUT PREHEATING OF THE PAVEMENT TO A SPECIFIC TEMPERATURE. FOR CONCRETE APPLICATION, A COMPATIBLE PRIMER SEALER MAY BE APPLIED BEFORE APPLICATION TO ASSURE PROPER ADHESION.

LEGEND

GREEN PATTERNED PAVEMENT

REVISIONS	
DATE	DESCRIPTION
07-31-2017	N/A
08-16-2019	UPDATED SPACING
08-10-2023	UPDATED NOTES

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: CARMELO CARATOZZOLO, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: CARMELO CARATOZZOLO, P.E.	

BICYCLE PAVEMENT MARKINGS AND SIGNS DETAILS

SHEET NO.
1 OF 2

ENGINEER:
ERIC FEGLIEIRO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 NEBRA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY:	DATE: 08/2024
MT	SCALE: AS SHOWN
DESIGNED BY: MT	
CHECKED BY: BK	
FIELD BOOK:	

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING DETAILS

SHEET NO.	OF
35	38

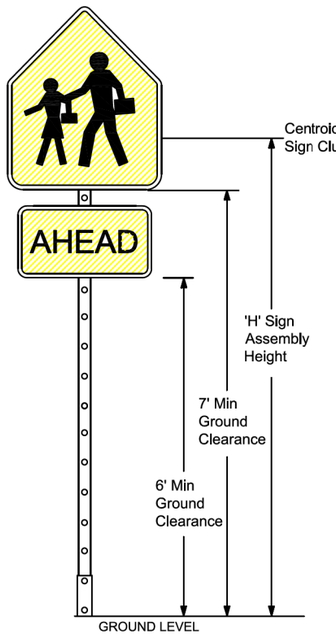
TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\04318430 4_Riverland Rd\04318430 4\signing\SHOTSP02.dgn 3/4/2025 4:08:18 PM max.teddy

GUIDE TO USE THIS STANDARD:

1. Calculate the Total Panel Area and the centroid 'C' for an individual sign or a sign cluster.
2. Determine the height 'H' from the groundline for the individual sign or the cluster.
3. Consult the Post Size Table and find the intersection point.
4. Design the post and the foundation according to the required Post Size and Assembly Details.

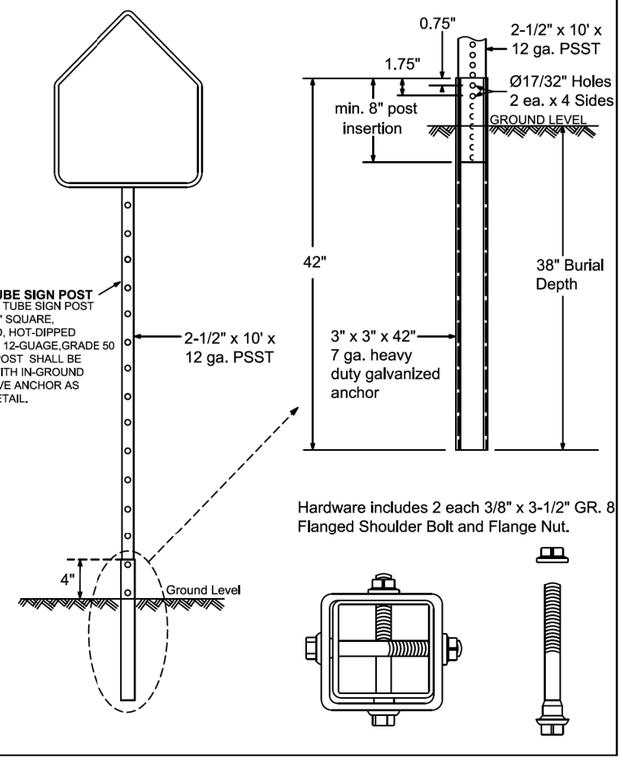


Post Size Table

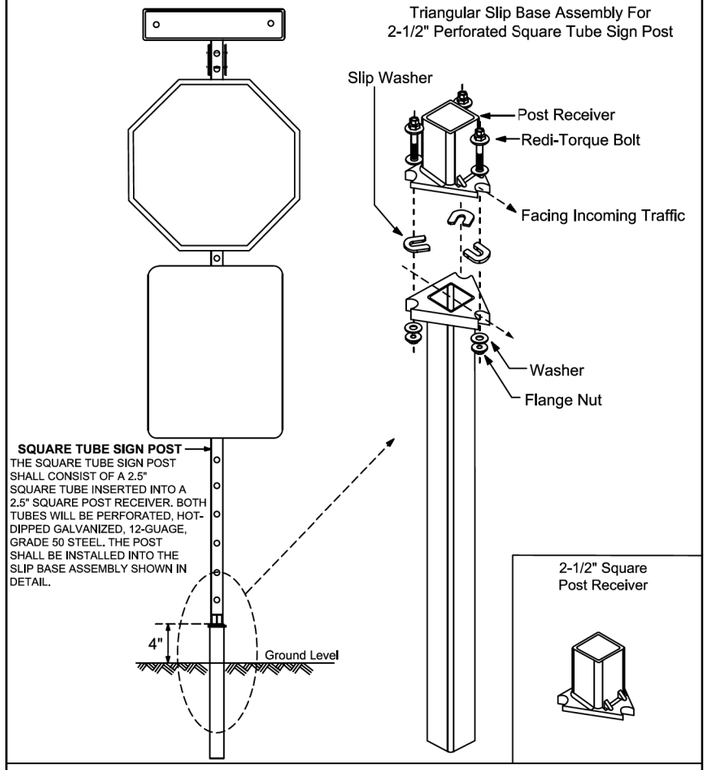
Total Panel Area (sf)	'H' Sign Assembly Height (ft) (measure from ground)				
	8	8.5	9	9.5	10
3					
4					
5	Sign Post with 3" x 7 ga. Square Anchor				
6					
7					
8					
9					
10					
11					
12					
13	Sign Post with Triangular Slip Base Assembly				
14					
15					
16					
17					
18	Two Post Installation Required with Triangular Slip Base				
19					
20+					

*REGARDLESS OF POST SIZE TABLE: IF A SIGN PANEL IS EQUAL TO OR GREATER THAN 4 FEET IN WIDTH, A TWO POST INSTALLATION IS REQUIRED WITH A TRIANGULAR SLIP BASE.

Sign Post with 3" x 7 ga. Square Anchor



Sign Post with Triangular Slip Base



Note: Dimensions and certain details for the parts used to assemble the slip base connections are intentionally not shown. Slip base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are only shown on this plan to illustrate how the parts are assembled. The complete assembly must be designed to withstand 150 mph Base Wind Speed per 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th edition and interims.

REVISIONS	
DATE	DESCRIPTION
03-21-2017	UPDATED POST SIZE
11-24-2020	ADDED POST SIZE NOTE
02-05-2021	UPDATED POST BASE HEIGHT

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: YVES D'ANJOU, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: ANDREW SEBO, P.E., PTOE	

GROUND SIGN ASSEMBLY DETAILS

SHEET NO.
1 OF 1

ENGINEER:
ERIC ERGUIERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1800 NEMTA WAY, SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DATE: 08/2024
DESIGNED BY: MT | SCALE: AS SHOWN
CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598
SIGNING AND PAVEMENT MARKING DETAILS

SHEET NO. 36 | OF 38
TOTAL: 38
CAD FILE:
SIGNING FILE NO.

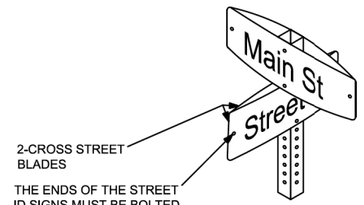
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\signing\SPOTSP03.dgn 4:08:46 PM 3/4/2025 max.teddy

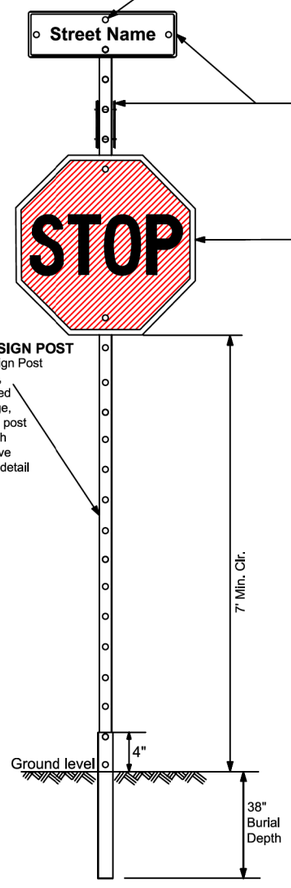
FOR SIGN ASSEMBLIES WITH MAXIMUM 8.75 SQUARE FOOT PANEL AREA

Typical Details

STREET ID (D3-1)

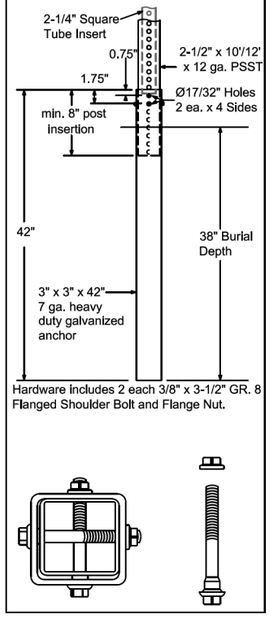


Isometric View



SQUARE TUBE SIGN POST
The Square Tube Sign Post shall be 2.5" square, perforated, hot-dipped galvanized, 12-gauge, grade 50 steel. The post shall be installed with in-ground fitted sleeve anchor as shown in detail "A" below.

DETAIL "A"



Hardware includes 2 each 3/8" x 3-1/2" GR. 8 Flanged Shoulder Bolt and Flange Nut.

STREET ID (D3-1) MATERIALS:

LETTERS
WHITE TYPE XI SHEETING
LETTERING OF STREET NAME SIGNS SHALL BE COMPOSED OF A COMBINATION OF LOWERCASE LETTERS WITH INITIAL UPPERCASE LETTERS

BORDER
BORDER WIDTHS WILL VARY BASED ON LETTER HEIGHTS

LETTER HEIGHTS - BORDER WIDTHS
4 INCH LETTER = 0.375 INCH BORDER WIDTH
6 INCH LETTER = 0.500 INCH BORDER WIDTH
8 INCH LETTER = 0.750 INCH BORDER WIDTH

GREEN BACKGROUND
GREEN TRANSLUSCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT

LETTER SIZES
SEE MUTCD TABLE 2D-2 (PG 163)
FOR MINIMUM LETTER HEIGHTS
LENGTH VARIES BY STREET NAME

HARDWARE
BOLTS - #18 HEX HEAD STAINLESS STEEL 5/16" x 3"
NUTS - 5/16" STAINLESS STEEL W/ NYLON WASHERS.

REGULATORY SIGN
WHEN NO STREET ID IS PRESENT THE STOP SIGN SHALL BE MOUNTED FLUSH TO THE TOP OF THE POST WHILE MAINTAINING 7 FEET MIN. CLEARANCE BETWEEN BOTTOM OF SIGN AND GROUND LEVEL. ANY SIGN INSTALLED BACK TO BACK WITH THE STOP SIGN SHALL BE SMALLER THAN THE STOP SIGN.

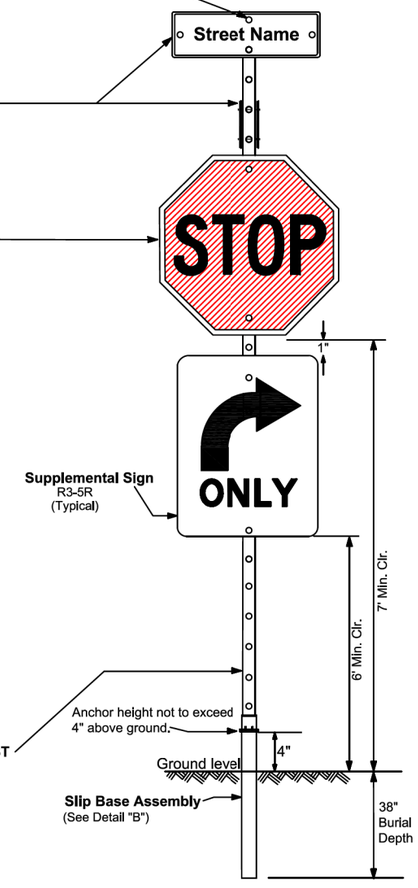
STOP, DO NOT ENTER OR YIELD
WHITE TYPE XI SHEETING
PRESSURE-SENSITIVE RED TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT.

HARDWARE
FRONT: #18 HEX HEAD STAINLESS STEEL 5/16" x 3" BOLT W/ 3/8" NYLON WASHER
BACK: 5/16" HEX HEAD STAINLESS STEEL NUT W/ 3/8" STAINLESS STEEL WASHER.

NOTES:
1. ALL TYPE XI SHEETING UTILIZED MUST BE ON THE FDOT APL LIST.
2. SEE BCTED TECHNICAL POLICY MEMO #TPM - 16-001 - SPECIFICATIONS FOR RETROFLECTIVE TRAFFIC SIGN MATERIALS.

FOR SIGN ASSEMBLIES WITH GREATER THAN 8.75 SQUARE FOOT PANEL AREA WITH SUPPLEMENTAL SIGN

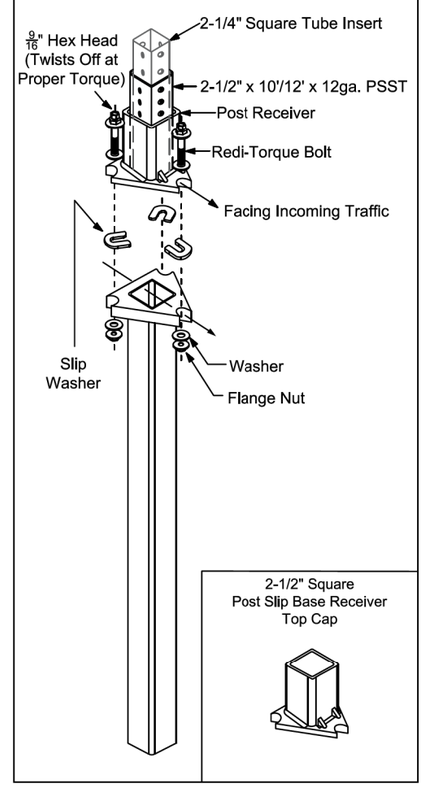
Typical Details



SQUARE TUBE SIGN POST
The Square Tube Sign Post shall consist of a 6 foot x 2.25" square tube insert inserted into a 2.5" square post receiver. Both tubes will be perforated, hot-dipped galvanized, 12-gauge, grade 50 steel. The post shall be installed into the slip base assembly shown in detail "B".

DETAIL "B"

Triangular Slip Base Assembly For 2-1/2" Perforated Square Steel Tube Sign Post



Notes:
1. Dimensions and certain details for the parts used to assemble the slip base connections are intentionally not shown. Slip base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are only shown on this plan to illustrate how the parts are assembled. The complete assembly must be designed to withstand 150 mph Base Wind Speed per 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th edition and interims.

2. For standard ground sign installation, see detail entitled " Ground Sign Assembly Details".

REVISIONS	
DATE	DESCRIPTION
02-28-2020	ADDED ISOMETRIC VIEW
02-05-2021	UPDATED POST BASE HEIGHT
06-22-2023	UPDATED SIGN POST NOTES

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: CARMELO CARATOZZOLO, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: CARMELO CARATOZZOLO, P.E.	

STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS

SHEET NO.
1 OF 1

ENGINEER:
ERIC FERGUIERO, P.E.
FEC No.86211
DATE:08/2024

ADD: 1800 NEWTA WAY, SUITE 200
BOCA RATON, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DATE: 08/2024 | SCALE: AS SHOWN
DESIGNED BY: MT | CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION & MOBILITY
290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING DETAILS

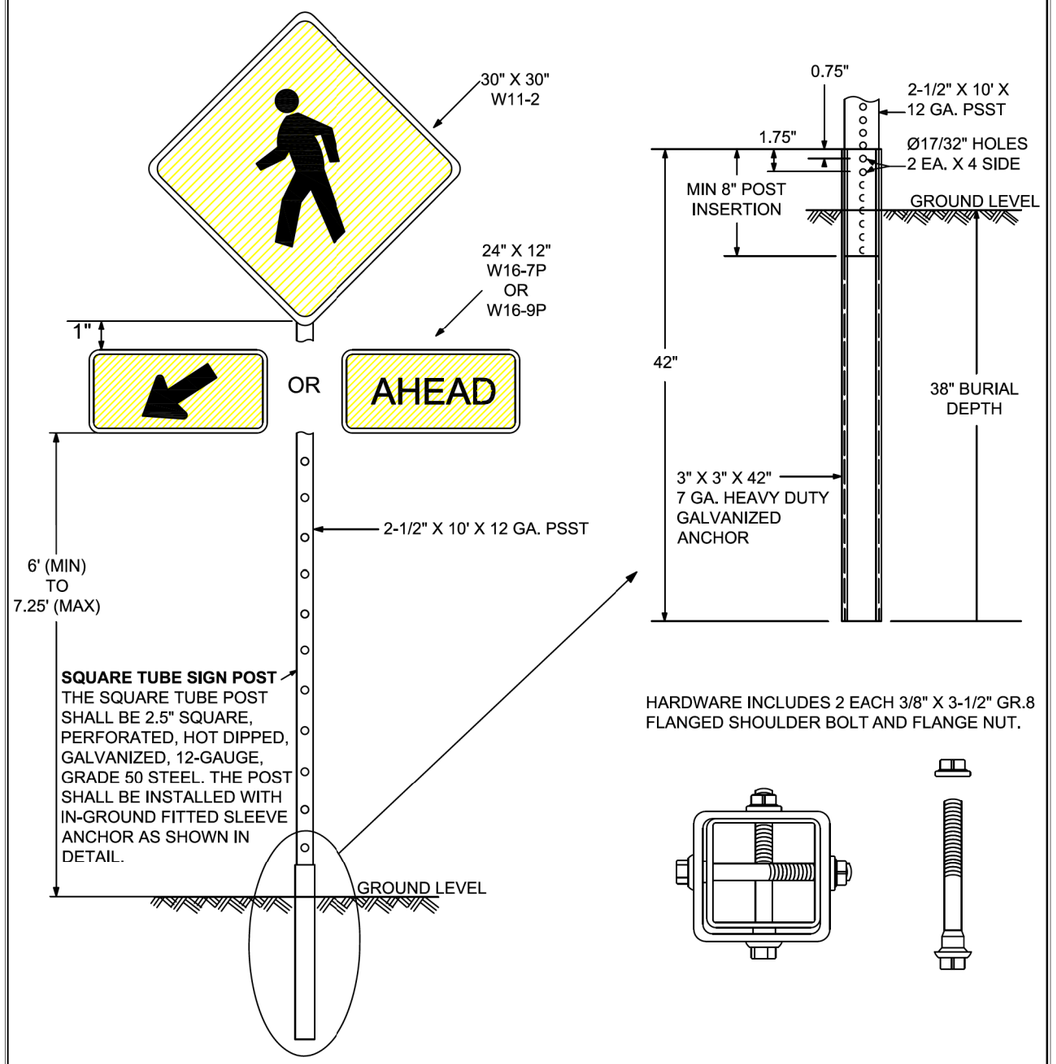
SHEET NO.	OF
37	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\Signing\SHOTSP04.dgn 4:09:01 PM 3/4/2025 max.teddy

W11-2 (30"x 30") & SUPPLEMENTAL (24"x12") SIGN ASSEMBLY



HARDWARE INCLUDES 2 EACH 3/8" X 3-1/2" GR.8 FLANGED SHOULDER BOLT AND FLANGE NUT.

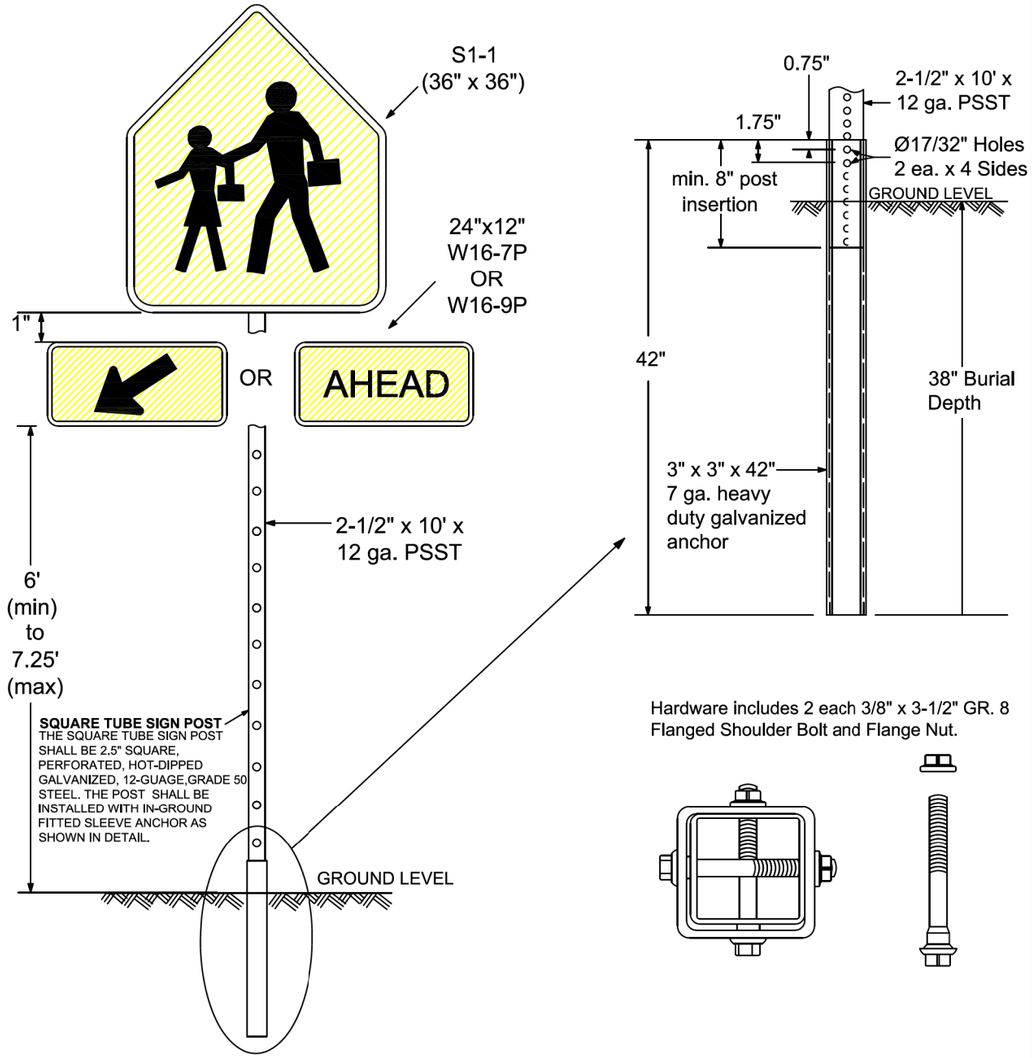
1. SCHOOL ZONE AND PEDESTRIAN SIGNS SHALL BE COMPRISED OF REFLECTIVE FLUORESCENT YELLOW-GREEN SHEETING. (SEE BCTED TECHNICAL POLICY MEMO #TPM-16-001 ON BCTED WEBSITE)
2. NOT FOR USE WITH RECTANGULAR RAPID FLASHING BEACONS

W11-2 (30"x 30") & SUPPLEMENTAL (24"x 12") SIGN ASSEMBLY	
REVISION: 11-15-18	SCALE: NTS
	DESIGN BY: YVES D'ANJOU, P.E.
	DRAWN BY: STEPHON RAMOUTAR
SHEET 1 OF 1	CHECKED BY: ANDREW SEBO, P.E., PTOE

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

S1-1 (36"x 36") & SUPPLEMENTAL SIGN ASSEMBLY



Hardware includes 2 each 3/8" x 3-1/2" GR. 8 Flanged Shoulder Bolt and Flange Nut.

NOTE: NOT FOR USE WITH RECTANGULAR RAPID FLASHING BEACONS

S1-1(36"x36") & SUPPLEMENTAL SIGN ASSEMBLY	
REVISION: 11-19-18	SCALE: NTS
	DESIGN BY: Yves d'Anjou, P.E.
	DRAWN BY: Stephon Ramoutar
SHEET 1 OF 1	CHECKED BY: Andrew Sebo, P.E., PTOE

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

ENGINEER:
ERIC FERGUIERO, P.E.
REG. No.86211
DATE:08/2024

ADD: 1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
TEL: 561-845-0855
FAX: 561-863-8175

DRAWN BY: MT | DATE: 08/2024
DESIGNED BY: MT | SCALE: AS SHOWN
CHECKED BY: BK | FIELD BOOK:

CITY OF FORT LAUDERDALE
TRANSPORTATION
&
MOBILITY

290 NE 3RD AVE, FORT LAUDERDALE, FL 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT #12598

SIGNING AND PAVEMENT MARKING DETAILS

SHEET NO.	OF
38	38

TOTAL: 38
CAD FILE:
SIGNING FILE NO.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

K:\WPB_Design\043184304_Riverland Rd\043184304\signing\SHOTSP06.dgn
4:09:18 PM
3/4/2025
max.teddy

CITY OF FORT LAUDERDALE BID SET PACKAGE

Riverland Road Traffic Calming Improvements

TECHNICAL SPECIFICATIONS

Issued on Behalf of:
Transportation and Mobility Department
290 NE 3rd Avenue
Fort Lauderdale, FL 33301

Danice Grujicic, Senior Project Manager

May 8, 2025

TABLE OF CONTENTS

DESCRIPTION	PAGES
DIVISION 1 – GENERAL REQUIREMENTS	**4**
SECTION 01001 - GENERAL REQUIREMENTS	4
SECTION 01005 - TECHNICAL PROVISIONS	13
SECTION 01010 - SUMMARY OF WORK	20
SECTION 01025 - MEASUREMENT AND PAYMENT	29
SECTION 01031 – ALTERATION PROJECT PROCEDURES	43
SECTION 01040 – COORDINATION	46
SECTION 01045 – CUTTING AND PATCHING	58
SECTION 01050 – PROJECT MANAGEMENT	61
SECTION 01055 – MAINTENANCE OF TRAFFIC	68
SECTION 01060 – REGULATORY REQUIREMENTS & PERMITS	70
SECTION 01070 – ABBREVIATIONS OF INSTITUTIONS	71
SECTION 01090 – REFERENCE STANDARDS	74
SECTION 01152 – APPLICATIONS FOR PAYMENT	77
SECTION 01200 – PROJECT MEETINGS	81
SECTION 01210 – SCHEDULES AND REPORTS	85
SECTION 01220 – CONSTRUCTION SEQUENCING	97
SECTION 01230 – TESTING AND INSPECTION	99
SECTION 01311 – CONSTRUCTION PROGRESS DOCUMENTATION	101
SECTION 01312 - FIELD ENGINEERING	109
SECTION 01320 - PROJECT RECORD DOCUMENTS	111
SECTION 01340 – SUBMITTAL PROCEDURES	118
SECTION 01380 – CONSTRUCTION PHOTOGRAPHS	128
SECTION 01400 – QUALITY CONTROL	131
SECTION 01410 – TESTING LABORATORY SERVICES	133
SECTION 01505 – MOBILIZATION	137
SECTION 01520 – CONSTRUCTION AIDS	139
SECTION 01530 – PROTECTION OF EXISTING FACILITIES	141
SECTION 01550 – SITE ACCESS AND STORAGE	147
SECTION 01560 – TEMPORARY CONTROLS	151
SECTION 01570 – TRAFFIC REGULATIONS	155
SECTION 01590 – PROJECT SIGN	158
SECTION 01600 – MATERIAL AND EQUIPMENT	161
SECTION 01710 – CLEANING	168
SECTION 01720 – PROJECT RECORD DOCUMENTS	170
SECTION 01780 CONTRACT CLOSEOUT	174
DIVISION 2 – SITE CONSTRUCTION	**181**
SECTION 02100 – SITE PREPARATION	181
SECTION 02110 – CLEARING	185
SECTION 02150 – DEMOLITION	187
SECTION 02200 - EARTHWORK	193

SECTION 02210 – SITE GRADING **212**
SECTION 02315 - FILL AND BACKFILL **215**
SECTION 02316 - EXCAVATION **221**
SECTION 02319 - SUBGRADE PREPARATION **223**
SECTION 02340 - EROSION CONTROL AND SOIL STABILIZATION **226**
SECTION 02575 - SURFACE RESTORATION **236**
SECTION 02630 - STORM DRAINAGE FACILITIES **248**
SECTION 02710 - LIMEROCK BASE **258**
SECTION 02761 - PAVEMENT MARKING **262**
SECTION 02771 - CONCRETE CURBS AND SIDEWALKS **268**
SECTION 02772 - ASPHALT CONCRETE PAVEMENT **272**
SECTION 02920 - SODDING **281**

DIVISION 3 – CONCRETE **285**
SECTION 03010 - CONCRETE **285**
SECTION 03100 – CONCRETE FORMWORK **291**
SECTION 03300 - CAST-IN-PLACE CONCRETE **295**
SECTION 03370 - CONCRETE CURING **324**
SECTION 03600 - GROUT **328**
SECTION 03740 - MODIFICATIONS AND REPAIR TO EXISTING CONCRETE **337**

DIVISION 1 – GENERAL REQUIREMENTS
SECTION 01001 - GENERAL REQUIREMENTS

PART 1 PROJECT DESCRIPTION

1.1 GENERAL

A. A brief description of the Work is stated in the INVITATION TO BID. To determine the full scope of the project or any particular part of the project, coordinate the applicable information in these Contract Documents and review the available project drawings.

B. The Work under this Contract shall be performed by the Contractor as required by the City of Fort Lauderdale (City). Work will be authorized by a Notice to Proceed (NTP) issued to the Contractor. The Contractor shall complete all work within the number of calendar days stipulated in the Contract unless an extension in the time of completion is granted by the CITY'S PROJECT MANAGER, as stated in the Instructions to Bidders. Upon satisfactory completion of the work and compliance with applicable provisions in the Contract Documents, the Contractor will receive final payment for all work done.

C. The following additional information, though not all-inclusive, is given to assist contractors in their evaluation of the work required to meet the projectobjectives.

D. Contractor shall be required to submit a Maintenance of Traffic (MOT) plan for work in the county and state highways and City streets. Contractor shall coordinate with MOTs for nearby or highway work and obtain approval for all traffic control as required by the permits contained elsewhere in this Section.

PART 2 SEQUENCE OF OPERATIONS

2.1 SCHEDULING

A. General: Prepare and submit schedule in accordance with the provisions of Section 01311, Construction Progress Documentation.
Plan the work and carry it out with minimum interference to the operation of the existing facilities. Prior to starting the work, confer with the CITY'S ENGINEER to develop an approved work schedule, which will permit the facilities to function normally as practical. It may be necessary to do certain parts of the construction work outside normal working hours in order to avoid undesirable conditions. The Contractor shall do this work at such times and at no additional cost to the City. Do not make connections between existing work and new work until necessary inspection and tests have been completed on the new work and it is found to conform in all respects to the requirements of the Contract Documents.

B. No work shall be started until the Contractor has received approved shop drawings, established material/delivery dates for all equipment, and received approval of the construction schedule from the ENGINEER. The Contractor shall have sufficient

manpower, equipment, and material to complete the project.

C. No work shall commence without express consent of the CITY'S ENGINEER.

D. If a privately owned staging area is required, no work shall commence until approval of the facility is obtained from City Planning and Zoning in accordance with Section 47-19.2 of the Unified Land Development Regulations. Submit a copy of the approval and agreement to the CITY'S ENGINEER.

2.2 MOBILIZATION AND DEMOBILIZATION

A. Contractor shall be responsible for mobilization and demobilization of labor, materials and equipment. Payment for mobilization and demobilization shall be included in the lump sum price indicated in the Proposal for the project.

2.3 COORDINATION

A. Contractor shall cooperate in the coordination of separate activities in a manner that will provide the least interference with the Owner's operations and other contractors and utility companies working in the area, and in the interfacing and connection of the separate elements of the overall project work.

B. If any difficulty or dispute should arise in the accomplishment of the above, the problem shall be brought immediately to the attention of the CITY'S ENGINEER.

2.5 OPERATION OF EXISTING SYSTEM PROHIBITED

A. At no time is the Contractor to undertake to close off any utility lines or open valves or take any other action, which would affect the operation of existing systems. The City's operations crew will operate all valves. Provide at least one business day notice to City prior to any operations.

PART 3 SITE CONDITIONS

3.1 SITE INVESTIGATION AND REPRESENTATION

The Contractor acknowledges satisfaction as to the general nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation, availability of labor, water, electric power, roads, and uncertainties of weather, river stages, or similar physical conditions, the character 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 this Contract.

A. Failure by the Contractor to become acquainted with the physical conditions and all the available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the Work.

B. The Contractor warrants that as a result of examination and investigation of all the aforesaid data, the Contractor can perform the work in a good and workmanlike

manner and to the satisfaction of the City. The City assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract; and (2) the Contract expressly provides that the responsibility therefore is assumed by the City.

3.2 INFORMATION ON SITE CONDITIONS

A. General: Information obtained by the CITY'S ENGINEER regarding site conditions, subsurface information, groundwater elevations, existing construction of site facilities, as applicable, and similar data will be available for inspection at the office of the CITY'S ENGINEER upon request. Such information is offered as supplementary information only. The CITY'S ENGINEER does not assume any responsibility for the completeness or interpretation of such supplementary information.

3.3 UTILITIES

A. The Contractor shall be responsible for determining and/or confirming, at his cost, the locations of all utilities within the project area, and shall be responsible for contacting each utility for location and notification prior to commencing work.

B. The Contractor shall contact potentially affected utilities as provided in Section 01060, Regulatory Requirements & Permits.

C. The Contractor shall contact Sunshine State One Call at 811 or visitwww.sunshine811.com at least 2 business days (10 business days for water crossings) prior to any excavation and make arrangements for locating all utilities in the project area.

3.4 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

A. Where the Contractor's operations could cause damage or inconvenience to utilities, telephone, television, power, water, or sewer systems, the operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by the Contractor with the owner of the utility affected.

Notify all utility offices, which are affected by the construction operation at least 2 business days in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for all existing underground utilities.

B. The Contractor shall be solely and directly responsible to the Owner and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage, which may result from the construction operations under this Contract.

C. Neither the Owner nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the Work.

D. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no case shall interruption of any water or utility service be allowed to exist outside working hours unless prior approval is granted.

E. In the event the Contractor encounters water service lines or sewer laterals that interfere with trenching, he may, by obtaining prior approval of the property owner, and the CITY'S ENGINEER, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense.

F. The Contractor shall replace, at his own expense, all existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract documents or ordered by the City's Engineer.

G. Telephone and communications drop, and signal systems may extend throughout the project area. Properly located cable, conduit, interface equipment, pull or junction boxes and other signal or systems equipment damaged by the Contractor shall be replaced at the Contractor's expense.

a. Damaged cable shall be replaced as an entire run, from junction box to junction box.

b. Notify Broward County Engineering two business days in advance of the need to remove any traffic detection loops.

c. Contractor shall verify marked cables and signal systems prior to excavation.

3.5 INTERFERING STRUCTURES

A. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground.

B. Protect underground and aboveground existing structures from damage, whether or not they lie within the limits of the easements obtained by the City. Where such existing fences, gates, sheds, buildings, or any other structure must be removed in order to properly carry out the construction, or are damaged during construction, restore to their original condition to the satisfaction of the property owner involved at the Contractor's own expense. Notify the City of any damaged underground structure, and make repairs or replacements before backfilling.

C. Without additional compensation, the Contractor may remove and shall replace in a condition as good as or better than original, such small miscellaneous structures as fences, mailboxes, and signposts that interfere with the Contractor's operations.

3.6 EASEMENTS AND WORK ON PRIVATE PROPERTY

A. Where portions of the work are located on public or private property, easements and permits will be obtained by the City, except as otherwise noted in these Specifications. Easements will provide for the use of property for construction purposes to the extent indicated on the easements. Copies of these easements and permits are available upon request to the City. It shall be the Contractor's responsibility to determine the adequacy of the easement obtained in every case and to abide by all requirements and provisions of the easement. The Contractor shall confine his construction operations to within the easement limits or street right-of-way limits or make special arrangements with the property owners or appropriate public agency for the additional area required. Any damage to property, either inside or outside the limits of the easements provided by the City or street rights-of-way, shall be the responsibility of the Contractor as specified herein. The Contractor shall provide immediate notice to the owner of any damage to fencing and provide temporary fencing as required to provide a functionally similar level of security. The Contractor shall remove, protect, and replace all fences or other items encountered on public or private property. Before final payment will be authorized by the City's Engineer, the Contractor will be required to furnish the City with written releases from property owners or public agencies where side agreements or special easements have been made by the Contractor or where the Contractor's operations, for any reason, have not been kept within the construction right-of- way obtained by the City or the street right-of-way.

B. The Contractor shall be responsible for all damage to private property where work related activities have occurred without proper easement or authorization. The City may withhold payment to the Contractor pending resolution of any claims by private owners.

C. It is anticipated that the required easements and permits will be obtained before construction is started. However, should the procurement of any easement or permit be delayed, the Contractor shall schedule and perform the work around these areas until such a time as the easement or permit has been secured.

D. Prior to removing an existing structure or item, provide written notice to the Owner at least 14 days in advance of the anticipated removal.

E. The Contractor shall not engage in private construction activities within the project area without the presence of a contract with the private owner of the property containing a hold harmless clause protecting the City from any and all damages that occur during the performance of the privately authorized work.

PART 4 SAFETY AND CONVENIENCE

4.1 SAFETY AND ACCESS

A. The Contractor shall do all work necessary to protect the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes in pedestrian sidewalk or walkway, and trenches or excavations in roadway. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the work. All barricades and signs shall be clean and serviceable, in the opinion of the City's Engineer.

B. During construction, the Contractor shall construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railing, barricades, or steel plates, as applicable, at all openings, obstructions, or other hazards in streets, sidewalks, floors, roofs, and walkways. All such barriers shall have adequate warning lights as necessary, or required, for safety. All lights shall be regularly maintained, and in a fully operational state at all times.

C. Homeowners and business owners shall be provided reasonable access. The Contractor shall provide temporary sidewalks, bridges or driveway access, including safe passage over open excavations as required.

4.2 ACCIDENT REPORTS

A. In addition, the Contractor must promptly report in writing to the CITY'S ENGINEER all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the ENGINEER.

B. If a claim is made by anyone against the contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the CITY'S ENGINEER, giving full details of the claim.

4.3 SAFE ACCESS BY FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

A. Authorized representatives of the state, federal, or local governmental agencies, shall at all times have safe access to the work, and the Contractor shall provide proper facilities for such access and inspection.

4.4 PROTECTION OF PROPERTY

A. Protect stored materials located adjacent to the proposed work. Notify property owners affected by the construction at least two business days in advance of the time construction begins. During construction operations, construct and maintain such facilities as may be required to provide access by all property owners to their property. No person shall be cut off from access to his residence or place of business for a period exceeding 2 hours, unless the Contractor has made special arrangements with the affected persons.

B. The Contractor shall identify and isolate his active work zone in such a manner as to exclude all personnel not employed by him, the CITY'S ENGINEER, and the City.

4.5 FIRE PREVENTION AND PROTECTION

A. The Contractor shall perform all work in a fire-safe manner. He shall supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable federal, state, and local fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Construction, Alteration, and Demolition Operations (NFPA No. 241) shall be followed.

4.6 ACCESS FOR POLICE, FIRE, AND POSTAL SERVICE

A. Notify the Fire Department and Police Department before closing any street or portion thereof. No closing shall be made without the Owner's approval of MOT plan. Notify said departments when the streets are again passable for emergency vehicles. Do not block off emergency vehicle access to consecutive arterial crossings or dead-end streets, in excess of 300 linear feet, without special written permission from the fire department. Conduct operations with the least interference to fire equipment access, and at no time prevent such access. MOT plans that result in restricted access for emergency vehicles must be submitted and approved 2 weeks prior to the proposed closing with separate and specific notification made to the ENGINEER to provide for appropriate agency coordination.

B. The Contractor shall leave a night emergency telephone number or numbers with the police department, the Engineer, and the Owner, so that contact may be made easily at all times in case of barricade and flare trouble or other emergencies.

C. Maintain postal service facilities in accordance with the requirements of the U.S. Postal Service. Move mailboxes to temporary locations designated by the U.S. Postal Service, and at the completion of the work in each area, replace them in their original location and in a condition satisfactory to the U.S. Postal Service.

PART 5 PRESERVATION, RESTORATION, AND CLEANUP

5.1 SITE RESTORATION AND CLEANUP

A. At all times during the work, keep the premises clean and orderly, and upon completion of the Work, repair all damage caused by equipment and leave the project free of rubbish or excess materials of any kind.

B. Stockpile excavated materials in a manner that will cause the least damage to adjacent lawns, grassed areas, gardens, shrubbery, or fences, regardless of whether these are on private property, or on state, county, or city rights-of-way. Remove all excavated materials from grassed and planted areas, and leave these surfaces in a condition equivalent to their original condition. Replace excavated

areas to conform to their original contours.

5.2 FINISHING OF SITE, BORROW, AND STORAGE AREAS

A. Upon completion of the project, all areas used by the Contractor shall be properly cleared of all temporary structures, rubbish, and waste materials and properly graded to drain and blend in with the abutting property. Areas used for the deposit of waste materials shall be finished to properly drain and blend with the surrounding terrain. Grassed areas shall be restored as specified.

5.3 HISTORIC PRESERVATION

A. The Contractor shall coordinate with the historic preservation representative supplied by the owner for initial excavation operations. If the project work should uncover prehistoric or historic artifacts associated with Native American cultures, early colonial cultures, or American settlements, all project activities in the area shall cease immediately.

B. All such discoveries shall be reported to the Florida Division of Historical Resources. Review and Compliance Section at (800) 847-7278.

C. Project activities in the affected area cannot resume without authorization from the Division of Historic Resources.

PART 6 PERMITS

6.1 GENERAL

A. City has prepared the following application for the Contractor to submit and obtain Permit:

a. Not Applicable for this project.

B. Permits to be obtained by the Contractor include, but are not limited to the following:

a. Local, County, and State contracting licenses as required.
b. MOT approval from local, county, and state agencies as required.
c. Broward County Planning and Environmental Regulation Division (BCPERD): Dewatering permit, including National Pollution Discharge Elimination System (NPDES) permit if required.
d. Environmental Recourse Permit if necessary.

C. The Contractor shall comply with all applicable permit conditions.

END OF SECTION

SECTION 01005 - TECHNICAL PROVISIONS

PART 1 GENERAL

1.1 SCOPE

A. Work under this contract includes furnishing materials, labor, tools equipment, supervision and incidentals necessary to construct infrastructure improvements.

1.2 ITEMS SPECIFIED ON DRAWINGS

A. Items of material, equipment, machinery and the like may be specified on the Drawings and not in the Technical Specifications. The CONTRACTOR shall provide such items in accordance with the General Notes on the Drawings.

1.3 FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS

A. After completion of construction, the CONTRACTOR shall provide three (3) sets of signed & sealed. As-Built Drawings with all the As-Built information; all locations, coordinates, dimensions and elevations of the constructed facilities, certified, signed and sealed thereon by a Land Surveyor registered in the State of Florida. All elevations shall refer to NAVD 88 (North American Vertical Datum of 1988) and all state plane coordinates shall be NAD 83 (with 1990 adjustment). The cost of such field layout and recording work shall be the responsibility of the CONTRACTOR. The As-Built utility information shall meet the requirements of the City of Fort Lauderdale and any other permitting agencies having jurisdiction on this project.

1.4 SALVAGE

A. Any existing equipment or material, including but not limited to valves, pipes, fittings, couplings, etc., which is removed as a result of construction under this project may be designated as salvage by the CONTRACT ADMINISTRATOR, and if so, shall be delivered clean to the CITY at a location directed by the CONTRACT ADMINISTRATOR. Any equipment or material not worthy of salvaging shall be disposed of by the CONTRACTOR at a suitable location in accordance with all applicable regulations, ordinances and laws at no additional cost to the CITY.

1.5 POWER

A. The CONTRACTOR shall furnish and pay for all electrical power required for the construction, testing and trial operation, prior to final acceptance by the CITY.

1.6 WATER SUPPLY

All water required for testing, flushing, and construction shall be furnished by the CITY and paid for by the CONTRACTOR. The purchase price shall be the prevailing rate as published by the CITY. The quantity of water used shall be determined by reading the meter at the start and at the finish of construction. The

CONTRACTOR shall make all arrangements and incur all expense involved in having the CITY provided with a vacuum relief or backflow preventer which shall meet the requirements of ASA A40.6, latest revision, and the local administrative authority.

1.7 MAINTENANCE

A. The CONTRACTOR shall fully cooperate at all times with the CITY in order to maintain the operation of the existing water and/or sewer system with the least amount of interference and interruption possible. The schedule plans and work of the CONTRACTOR shall at all times be subject to alteration and revision if necessary, for public health and safety considerations. The creation of a public nuisance will not be permitted.

B. It may be necessary to interrupt the operation of the existing water and/or sewer system. In all cases where the CONTRACTOR must cause an interruption, CONTRACTOR shall prepare and submit to the CITY'S ENGINEER four (4) working days prior to commencing the work, a complete description of the proposed procedure and a time schedule, which CONTRACTOR will guarantee. At least forty-eight (48) hours prior to the time proposed for starting the work, the CITY'S ENGINEER will notify the CONTRACTOR whether or not the work will be permitted as proposed.

a. The CITY'S ENGINEER reserves the right to require the CONTRACTOR to work 24 hours per day in all cases where, in ENGINEER'S opinion, interference with operation of the system may result in dangerous health hazards or offensive conditions.

b. In no case will the CONTRACTOR be permitted to interfere with the existing system until all materials, supplies, equipment, tools and incidentals necessary to complete the work are on the site. Backup equipment on key equipment items shall be required on work necessitating interference with the existing system.

1.8 SITE RESTORATION

A. The CONTRACTOR shall remove all excess material and shall clean up and restore the site to its original condition or better. All damage, as a result of work under this Contract, done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basins, flagstones, rocked, graveled, or stabilized areas of driveways, and including all obstructions not specifically named herein, shall be repaired, or replaced, as determined by the CITY'S ENGINEER. Site restoration shall be done in a timely manner as the work progresses. Site restoration work shall be completed on private property within 30 days after being disturbed.

1.9 SANITARY FACILITIES

A. The CONTRACTOR shall provide temporary facilities at the site as directed by the CITY'S ENGINEER.

1.10 STANDARDS

A. Wherever in these TECHNICAL SPECIFICATIONS or in the drawings name and/or number refer to certain standards or regulations, the applicable publication shall be the latest revision thereof. Reference by abbreviation is made in accordance with the Section 01070, "Abbreviations of Institutions."

1.11 QUALITY OF ITEMS

A. All material furnished for this project shall be new and unused. Any material, which has become excessively weathered or damaged since manufacture, shall not be considered as new. CITY'S ENGINEER shall be the sole judge as to what constitutes excessive weathering or damage.

1.12 TESTING

A. The City of Fort Lauderdale Engineering Minimum Design and Construction Standards may require that materials and equipment supplied meet given standards and testing to demonstrate conformance to the standards is a part of those standards. The cost of these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.

B. The CONTRACTOR shall select a recognized, independent testing laboratory to make tests on concrete, asphalt, soils and other materials for the construction phase, to test for conformity with the TECHNICAL SPECIFICATIONS, FDOT and BROWARD COUNTY Construction Standards, and any other applicable testing/Quality control standards as required by all permitting agencies having jurisdiction over this project. The CONTRACTOR shall supply the necessary samples for this testing without cost to the CITY. The costs for actual testing shall be paid by the CONTRACTOR and scheduling of all required tests will be the responsibility of the CONTRACTOR.

C. Construction in areas where installation and restoration must satisfy the additional requirements of a local, state or federal authority may require testing to demonstrate conformance. The CONTRACTOR shall ascertain the extent of testing required by regulatory agencies within these areas. The CONTRACTOR is responsible for performing such tests, including but not limited to, tests of compaction, and all costs for these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.

1.13 UTILITY CROSSINGS

A. It is intended that wherever existing utilities must be crossed that the pipe may be deflected up to 75% of the manufacturer's recommended limits, but shall not

exceed the allowable limits of the CITY. Adequate cover shall be used to adequately clear the obstruction. However, when in the opinion of the CITY'S ENGINEER, this procedure is not feasible CITY'S ENGINEER may direct the use of fittings to clear a utility crossing as detailed on the Drawings. The cost of such crossing including joint restraints shall be on the basis of the schedule of pay items applied.

B. Deflections and adjustments of the proposed water and/or sewer mains to avoid all other existing utilities shall be verified/determined in the field during construction.

1.14 BASIS OF MEASUREMENT

A. Where mains are to be paid for on a unit price per linear foot basis, the number of linear feet will be determined by measurement along the centerline of the pipe in place, including fittings. Square yardage will be determined by the actual number of square yards installed.

1.15 ADJUSTMENT AND RELOCATION OF EXISTING LINES

A. When the drawings indicate that existing lines must be deflected, the pipe may be deflected up to 75% of the manufacturer's recommended limits but shall not exceed the allowable limits of the CITY. The CONTRACTOR will need to be directed by the ENGINEER. If the ENGINEER determines that the use of new pipe and fittings is required for deflection, the CONTRACTOR will be directed to use this method. The price for either method shall be based upon the unit prices bid. This does not apply to connections to existing system (Paragraph 1.17, this Section).

1.16 CONNECTION TO EXISTING SYSTEM

A. The CONTRACTOR shall perform all work necessary to locate, excavate and prepare for connection to the existing mains as shown on the Drawings. The cost of this work and for the actual connection to the existing main shall be based upon the unit prices for installing the pipe and appurtenances and shall not result in any additional cost to the CITY. The cost of ductile iron sleeves shall be included in the fitting's unit price.

B. Additional valves used for the CONTRACTOR's convenience shall not be considered as an extra cost payable by the CITY for the tie-in to the existing system.

During all phases of the work, (i.e., installation, testing and restoration), the CONTRACTOR shall ensure at all times the safe operation of the existing water and/or sewage systems. Service to the customers shall be maintained with the least amount of interference and interruption as possible.

1.17 RELOCATIONS

A. The CONTRACTOR shall be responsible for the relocation of structures that are shown on the drawings, including, but not limited to, light poles, signs, fences, piping, conduits and drains that interfere with the proposed positioning of the water/sewer mains. The cost of all such relocations shall be included in the prices bid for the appropriate items.

1.18 UTILITIES

A. Existing utilities are shown on the Drawings insofar as information is reasonably available; however, it will be the responsibility of the CONTRACTOR to preserve all existing utilities whether shown on the Drawings or not. If utility conflicts are encountered by the CONTRACTOR during construction, CONTRACTOR shall give sufficient notice to the CITY so that they may make the necessary adjustments. Damage to any utility, which in the opinion of the CITY is caused by carelessness on the part of the CONTRACTOR, shall be repaired at the expense of the CONTRACTOR.

1.19 GUARANTEE

A. The CONTRACTOR shall guarantee the equipment, material and labor performed under the Contract against any and all failures in proper use and operation for a period of one (1) year from date of written acceptance by the CITY.

B. The CONTRACTOR shall also obtain warranties from manufacturers for each piece of equipment furnished so that the manufacturer's warranty fully covers the equipment for a period of one (1) year from the date of written acceptance by the CITY, unless otherwise specified in the specifications.

1.20 PERFORMANCE OF WORK

A. The CONTRACTOR shall provide all personnel and equipment required to complete all work specified herein and on the Drawings. In an emergency situation, if the CITY determines that it must provide staff and/or equipment to assist the CONTRACTOR in the satisfactory performance of the Contract terms and conditions, the CONTRACTOR at the applicable prevailing wage rates shall reimburse the CITY.

B. CONTRACTOR shall provide forty-eight (48) hours advance written notice to the CITY for approval of CONTRACTOR'S intention to work overtime on weekdays or to work on the weekends.

1.21 BARRICADING (SAFETY)

A. The CONTRACTOR shall be responsible for the furnishing and maintaining of all required barricades, either the lighted or the reflector type, to ensure the public's safety during open trench work or for any other potentially unsafe or hazardous construction activities. Barricades shall be located and displayed in conformance with the most stringent regulations required by the governing agencies. All costs

for barricading, including any permits, shall be the responsibility of the CONTRACTOR.

B. All work in public rights-of-way and on private property shall be done in strict compliance with these specifications and Florida Department of Transportation Minimum Standards. Failure to so comply will result in cessation of operations and the removal of project related obstructions from the right-of-way until compliance is achieved.

1.22 EMERGENCY ACCESS AND SECURITY

A. In order to provide protection to the workers and residents, the CONTRACTOR shall maintain emergency access to the property at all times during construction. These access ways shall be protected and delineated with lighted barricades or other such devices as approved by the regulatory agency. Both ends of the emergency access way shall be blocked in accordance with the MOT permit approved by the CITY with signage indicating that this access way is to be used by emergency vehicles only.

B. No trenches or holes shall be left open after working hours. In the event a trench must be left open after hours, it shall be done so only with the express written permission from the ENGINEER, and it shall be the CONTRACTOR'S responsibility to provide proper protection of the open trench or hole as required by the regulatory agency. In addition, the CONTRACTOR shall provide a security guard at the site whenever the CONTRACTOR'S personnel are not present, 24 hours per day/ 7 days per week. It shall be the Security Guard's responsibility to protect the open trench or hole from trespassers and to direct emergency personnel on site. The Security Guard shall not have any other responsibilities such as operating pumps or equipment but shall be dedicated to protecting the trench or open hole. The Security Guard shall be equipped with a wireless telephone capable of calling 911 to report an emergency and shall keep that telephone on their person at all times. In addition to this provision the CONTRACTOR shall maintain trench safety and comply with current OSHA regulations and the Trench Safety Act. The CONTRACTOR shall maintain and keep all safety barricades, signage, flashers, and detours, in operating condition. A copy of the approved MOT plans, and details, shall be on site at all times.

C. All roads are to be maintained during the described construction as to always allow Emergency Access. This item will be paid for under the bid item for Mobilization as named in the Bid Schedule.

1.23 VIBRATORY COMPACTION

A. The use of vibratory compaction equipment shall be limited to a total gross weight of three (3) tons. The use of vibratory equipment shall be limited to compacting backfill of utility trenches and subgrade of paved areas only. If approved in writing by the ENGINEER, larger vibratory compaction equipment may be allowed if operated in a static mode only.

1.24 REPORTING OF DAMAGE CLAIMS

A. The CONTRACTOR shall keep the CITY informed of any damage claims made against the CONTRACTOR during the construction period. All claims for automobile damage, property damage/bodily injury will be reported to the CONTRACT ADMINISTRATOR within 24 hours of receipt of notice. CONTRACTOR will conduct a timely investigation of the claim and determine if they will honor the claim and/or report to their insurance carrier. CONTRACTOR will advise the City of Fort Lauderdale in writing of their decision/referral to carrier.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01010 - SUMMARY OF WORK

PART 1 GENERAL

1.1 SCOPE

A. City: City of Fort Lauderdale

a. City's Representative/Engineer: Danica Grujicic*, Senio Project Manager*, or designated representative.

A. The general location of the PROJECT is along Riverland Road from US-441/SR-7 to Davie Boulevard/SR-736 in Fort Lauderdale, Florida. The work of this Contract includes raised intersections. The work will include but not be limited to site preparation, earthwork, asphalt pavement installation, pavement marking installation, signage installation, concrete curb, gutter, and sidewalk construction.

B. The work to be performed by the selected CONTRACTOR shall include the acquisition of all tools, equipment, materials, and other supplies including but not limited to fuel, power, water, and communication devices required to complete the scope of work stated in the Contract Documents for the PROJECT. The work also includes the performance of all labor, work, and other operations required to complete the scope of work stated in the Contract Documents for the PROJECT. All work must be complete with all work, materials, and services not directly specified in the Contract Documents but necessary for the completion of the PROJECT to fulfill the intent of the CITY shall be performed and installed by the DESIGN-BUILD FIRM at no additional cost to the CITY above what is agreed upon in the Contract Documents.

1.2 NOTICE TO BIDDERS

A. The successful bidder, in order to be considered responsive, must possess the appropriate License as described in the Contract Documents.

B. It should also be noted that the successful bidder will, at the time of the pre-construction conference, be required to show that each of the CONTRACTOR'S subcontractors is in compliance with the City's Code of Ordinances.

1.3 SITE INVESTIGATION

A. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and all subcontractors have satisfied themselves to the nature and location of the work, the general and local conditions including, but not restricted to: those bearing upon transportation; disposal, handling and storage of materials; access roads to the site; the conformation and conditions of the work area; and the character of equipment and facilities needed preliminary to and during the performance of the work. Failure on the part of the CONTRACTOR to completely or properly evaluate the site conditions shall not be grounds for

additional compensation.

B. Soil boring information will not be furnished to the CONTRACTOR. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and subcontractors have satisfied themselves as to the nature and extent of soil and (underground) water conditions on the project site.

1.4 WORK BY OTHERS

A. Concurrent Work by Other CONTRACTORS. The CONTRACTOR'S attention is directed to the fact that other CONTRACTORS may conduct work at the site during the performance of the WORK under this Contract. The CONTRACTOR shall conduct its operations so as to cause little or no delay to WORK of such other CONTRACTORS, and shall cooperate fully with such CONTRACTORS to provide continued safe access to their respective portions of the site, as required to perform work under their respective contracts.

B. Interference with Work on Utilities. The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.5 WORK SEQUENCE

A. The CONTRACTOR shall schedule and perform the work in such a manner as to result in the least possible disruption to the public's use of the parking lot and park facilities, roadways, driveways, and utilities. Utilities shall include but not be limited to water, sewerage, drainage structures, ditches and canals, gas, electric, television and telephone. Prior to commencing with the WORK, CONTRACTOR shall perform a location investigation of existing underground utilities and facilities in accordance with Section 01530 entitled "Protection of Existing Facilities" and shall have obtained all required permits and permissions, CONTRACTOR shall also deliver written notice to the CITY, ENGINEER, and property occupants (private and public) of all planned disruption to roadway, driveways, temporary displacement of fences, mailboxes, street signs and traffic signs, and utilities 72 hours in advance of disruption.

1.6 WORK SCHEDULE

Time is of the essence in completing this project. Because time is of the essence the CONTRACTOR shall commit the necessary resources to this project to complete it in a timely manner. Those resources may include multiple working crews, working overtime, etc. Because time is of the essence, the CONTRACTOR'S construction progress will be monitored closely on a weekly basis. The Construction progress will be measured with the construction schedule submitted by the CONTRACTOR. If the ENGINEER determines that the CONTRACTOR does not meet the Critical Path Method (CPM) as specified in Section 01311, the CONTRACTOR will be required to commit those resources

necessary to ensure the completion of the project in a timely manner including working overtime, adding other work crews, etc. All costs incurred to implement measure to complete the work in timely manner will be borne by the CONTRACTOR at no additional cost to the OWNER.

A. REQUIRED PERIODS OF WORK SUSPENSION

a. CONTRACTOR shall shut down operations for all City Holidays, terminating production work by noon on the day preceding the holiday (or the weekend before said holiday) and not resuming operations until the start of the following week (or the day after the holiday, whichever is later). The CONTRACTOR shall ensure that the site is restored per Sections 01001 and 01010 and all areas that are off limits to the public will be clearly delineated and protected. For a full list of holidays, please refer to the City; however, these include but are not limited to New Year's Eve and Day, Martin Luther King's Birthday, Memorial Day, the 4^{4th} of July, Labor Day, Thanksgiving Day and the day after Thanksgiving Day, Christmas Eve and Christmas.

b. The CONTRACTOR shall include these provisions in the schedule required in 01311 and there shall be no additional time granted for these work suspensions.

c. No additional compensation shall be granted for demobilization, cleaning and remobilization as a result of these work suspensions.

d. During the work suspensions, the CONTRACTOR shall remain liable for the safety and security of the project site and be available 24 hours per the Contract Documents. CONTRACTOR shall have personnel visit the site daily during these suspensions to ensure the safety and security of the site.

B. SCHEDULE

a. CONTRACTOR shall submit scheduling information for the work as required in Section 01311 "Construction Progress Documentation".

b. No separate payment shall be made for preparation and/or revision of the schedule.

C. On-Site Work Hours: Work hours shall be defined at the pre-construction meeting and shall comply with all permit conditions. Except otherwise indicated, work shall be performed during normal business working hours of 7:30 a.m. to 4:00 p.m., Monday through Friday.

1.7 COMPUTATION OF CONTRACT TIME

A. It is the CONTRACTOR'S responsibility to provide clear and convincing documentation to the ENGINEER as to the effect additional work will have with respect to additional contract time extension that may be justified. If additional

quantities of work can be carried out concurrent with other existing construction activities without disrupting the critical path of the project, then no contract time extension will be granted. The CONTRACTOR is obligated to provide documentation to the ENGINEER if additional elements of work affect the critical path of the project. If work set forth in the original scope of the project is deleted, the contract time may be reduced. This contract is a calendar day contract. While the CONTRACTOR may be granted time to suspend work operations for vacations or holidays, contract time will not be suspended. During suspensions, the CONTRACTOR shall be responsible for all maintenance of traffic and liability without additional compensation from the CITY.

1.8 CONTRACTOR USE OF PREMISES

A. The CONTRACTOR's use of the project site shall be limited to its construction operations. The CONTRACTOR will arrange for storage of materials and a copy of an agreement for use of other property shall be furnished to the ENGINEER.

1.9 PRE-CONSTRUCTION CONFERENCE

A. After the award of Contract, a Pre-construction Work Conference will be held between the CONTRACTOR, the ENGINEER, the CITY, other interested Agencies, representatives of Utility Companies and others affected by the work. The ENGINEER will set the time and place of this conference. The CONTRACTOR shall bring to the conference a copy of the proposed work schedule for the approval by the ENGINEER of the proposed methods and manner of executing the work including sequences of operation and time schedule. The work shall be performed in accordance with such schedule or approved amendments thereto.

1.10 UTILITY LOCATIONS

A. As far as possible, all existing utility lines in the project area have been shown on the plans. However, the CITY does not guarantee that all lines are shown, or that said lines are in their true location. It shall be the CONTRACTOR'S responsibility to identify and locate all underground or overhead utility lines or equipment affected by the project. No additional payment will be made to the CONTRACTOR because of discrepancies in actual and plan location of utilities and damages suffered as a result thereof.

B. The CONTRACTOR shall notify each utility company involved at least thirty (30) days prior to the start of construction to arrange for positive underground location, relocation or support of its utility where that utility may be in conflict with or endangered by the proposed construction. The CONTRACTOR shall pay for relocation of water mains or other utilities for the convenience of the

CONTRACTOR. The CONTRACTOR shall pay for all charges by utility companies for temporary support of its utilities. All costs of permanent utility relocations to avoid conflict shall be the responsibility of the CONTRACTOR and the utility company involved.

C. The CONTRACTOR shall schedule and coordinate their work in such a manner

that they are not delayed by the utility companies relocating or supporting their utilities. No compensation will be paid to the CONTRACTOR for any loss of time or delay.

D. All overhead, surface, and underground structures and/or utilities encountered are to be carefully protected from damage or displacement. All damage to said structures and/or utilities is to be completely repaired within a reasonable time; needless delay will not be tolerated. The CITY reserves the right to remedy any damage by ordering outside parties to make repairs at the expense of the CONTRACTOR. All repairs made by the CONTRACTOR are to be made to the satisfaction of the utility owner and shall be inspected by a representative of the utility owner and the ENGINEER.

E. The CONTRACTOR should be aware of the Sunshine State One Call Center, which has a free locating service for CONTRACTORS and excavators. Within forty-eight hours before excavating, dial toll free 1-800-432-4770, and a locator will be dispatched to the work location. CONTRACTOR shall reasonably notify other utility companies not notified by Sunshine State One Call Center.

F. Permits to be obtained by the CONTRACTOR include, but are not limited to the following:

a. Local, County, and State contracting licenses.
b. BCEPGMD: Dewatering permit, including NPDES permit if required.

1.11 LINE AND GRADE

The ENGINEER has provided vertical and horizontal control for layout of the work in the form of benchmarks and reference points located adjacent to the work. From these controls provided, the CONTRACTOR shall develop and make all detailed surveys needed for construction as-built purposes and shall establish all working points, lines and elevations necessary to perform the work. A Professional Land Surveyor registered in the State of Florida shall supervise this surveying work.

1.12 PROTECTION AND RESTORATION OF SURVEY MONUMENTS

A. The CONTRACTOR shall carefully protect from disturbance all survey monuments, stakes, and benchmarks, whether or not established by CONTRACTOR, and shall not remove or destroy any surveying point until it has been properly witnessed by the ENGINEER. All major survey monuments that have been damaged by the CONTRACTOR such as section corners, 1/4 section corners; property corners or block control points shall be replaced at the CONTRACTOR'S expense with markers of a size and type approved by the ENGINEER. The replacement shall be under the supervision of a Florida Registered Land Surveyor where directed by the ENGINEER.

1.13 EQUIPMENT

A. All equipment necessary and required for the proper construction of all facilities

shall be on the construction site, in first-class working condition.

1.14 STORAGE SITES

A. The CONTRACTOR shall furnish, at CONTRACTOR's expense, properly zoned areas suitable for field office, material storage and equipment service and storage. No material may be stored in the public right of way without prior authorization by the agency having jurisdiction. The CONTRACTOR shall keep these areas in a clean and orderly condition so as not to cause a nuisance or sight obstruction to motorists or pedestrians.

1.15 OWNERSHIP OF EXISTING MATERIALS

A. All materials removed or excavated from the job site shall remain the property of the CITY until released by the Contract Administrator, at which time it shall become the property of the CONTRACTOR, who shall dispose of it in a manner satisfactory to the ENGINEER.

1.16 EXCESS MATERIAL

A. Upon direction of the ENGINEER, all vegetation, debris, concrete or other unsuitable materials shall be disposed of in areas provided by the CONTRACTOR and approved by the ENGINEER. Any excess material desired to be retained by the CITY shall be delivered by the CONTRACTOR to a designated area within a 5-mile radius of the project, at no extra cost to the CITY.

1.17 AUDIO-VISUAL PRECONSTRUCTION RECORD

A. General

a. The CONTRACTOR shall engage the services of a professional electrographer. A responsible commercial firm known to be skilled and regularly engaged in the business of preconstruction color audio-video documentation shall prepare the color audio-video on a flash drive or external drive. The electrographer shall furnish to the ENGINEER a list of all equipment to be used for the audio-video recording i.e., manufacturer's name, model number, specifications and other pertinent information. Additional information to be furnished by the electrographer are the names and addresses of two references that the electrographer has performed color audio-video recording for on projects of a similar nature within the last 12 months.

b. Prior to beginning the work, the CONTRACTOR shall have a continuous color audio-video recording taken along the entire length of the project to serve as a record of preconstruction conditions. No construction shall begin prior to review and approval of the video covering the construction area by the ENGINEER. The ENGINEER shall have the authority to reject all or any portion of the videos not conforming to the specifications and order that it be redone at no additional charge. The CONTRACTOR shall reschedule

unacceptable coverage within five days after being notified. The ENGINEER shall designate those areas, if any, to be omitted from or added to the audio-video coverage.

B. Flash Drive/External Drive:

a. CONTRACTOR shall provide the ENGINEER and the CITY with one complete set of flash drives/external drives for the project area. Any other format must be approved by ENGINEER.

1.21 ENVIRONMENTAL PROTECTION

A. The CONTRACTOR shall furnish all labor and equipment and perform all work required for the prevention of environmental pollution during and as a result of the work under this contract. For the purpose of this contract, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, land and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as other pollutants. Environmental pollution prevention shall be in accordance with NPDES requirements with no additional cost to the CITY.

1.22 MAINTENANCE AND PROTECTION OF TRAFFIC

A. The CONTRACTOR shall provide all necessary traffic control devices in order to redirect, protect, warn, or maintain existing vehicular and pedestrian traffic during the course of construction.

a. Construction Phasing Requirements

i. Contractor shall maintain access to all residences and businesses during construction.

B. TRAFFIC CONTROL

a. The CONTRACTOR is required to submit a conceptual Traffic Control Plan at the Pre-Construction Conference. This preliminary plan should identify the phases of construction that the CONTRACTOR plans to proceed with and identify traffic flows during each phase. The ENGINEER will have ten (10) days to notify the CONTRACTOR of any comments. Once the conceptual plan for maintaining traffic has been approved, the CONTRACTOR will be required to submit a detailed plan showing each phase's Maintenance and Protection Plan prior to starting construction of any phase.

b. The "Maintenance of Traffic" plan shall include pedestrian traffic as well as

vehicular traffic. It shall be the responsibility of the CONTRACTOR for any necessary construction, pavement marking and signage or any pedestrian signalization and/or signal modification to accommodate an alternate safe walk route.

c. The CONTRACTOR, at all times, shall conduct the work in such a manner as to ensure the least obstruction to traffic as is practical. Convenience of the general public and of the residents adjacent to the work shall be provided for in a satisfactory manner, as determined by the ENGINEER.

d. Sidewalks, gutters, drains, fire hydrants and private drives shall, insofar as practical, be kept in condition for their intended uses. Fire hydrants on or adjacent to the work shall be kept accessible to fire apparatus at all times, and no material or obstruction shall be placed within twenty (20) feet of any such hydrant.

e. All existing stop and street name signs will be maintained as long as deemed necessary by the ENGINEER.

f. The CONTRACTOR shall furnish a sufficient number of protective devices to protect and divert the vehicular and pedestrian traffic from working areas closed to traffic, or to protect any new work. Failure to comply with this requirement will result in the ENGINEER shutting down the work until the CONTRACTOR provides the necessary protection.

g. Any time traffic is diverted for a period of time that will exceed one- work day temporary pavement markings will be required. Existing pavement markings that conflict with the new work zone traffic pattern must be obliterated. Painting over existing pavement markings (black out) is not permitted.

1.23 MAINTENANCE AND PROTECTION OF EXISTING DRAINAGE SYSTEM

A. It shall be the responsibility of the contractor to maintain positive drainage on the surface and to ensure that the existing underground drainage system continues to function as intended during the construction. The contractor shall follow the plans to ensure that existing catch basins and manholes are being protected during the entire phase of construction.

1.24 APPLICATION FOR PAYMENT FOR STORED MATERIALS

A. Application for payment for stored materials may not be made by the CONTRACTOR.

1.25 SPECIAL CONDITIONS FOR CONSTRUCTION BY OTHER AGENCIES

A. It will be the CONTRACTOR’S responsibility to coordinate construction schedules with other contractors so as to minimize disruptions, and inconveniences. The project site shall be safe at all times for construction workers and marina visitors.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUBMITTALS

A. See Section 01340, Submittal Procedures, and all other references to document submittals. Submittals shall include, but are not limited to:

a. Schedule of Values: Submit schedule on OWNER's form.

b. Application for Payment.

c. Final Application for Payment.

1.2 SCHEDULE OF VALUES

A. Prepare a schedule of values for the Work.

B. Unit Price Work: Reflect unit price quantity and price breakdown from conformed Bid Form.

C. Lump Sum Work:

1. Reflect schedule of values format included in conformed Bid Form.

2. List Bonds and insurance premiums, mobilization, demobilization, facility startup, and contract closeout separately.

3. Break down by Divisions 2 through 16 with appropriate subdivision of each Specification.

D. An unbalanced or front-end loaded schedule will not be acceptable.

E. Summation of the complete schedule of values representing all the Work shall equal the Contract Price.

1.3 APPLICATION FOR PAYMENT

A. Transmittal Summary Form: Attach one Summary Form with each detailed Application for Payment and include Request for Payment of Materials and Equipment on Hand as applicable. Execute certification by authorized officer of CONTRACTOR.

B. Use detailed Application for Payment Form provided by OWNER.

C. Include accepted schedule of values for each portion of Work and the unit price breakdown for the Work to be paid on unit price basis, and a listing of OWNER-

selected equipment, if applicable, and allowances, as appropriate.

D. Preparation:

a. Round values to nearest dollar.

b. List each Change Order and Written Amendment executed prior to date of submission as separate line item. Totals to equal those shown on the Transmittal Summary Form.

c. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form, a listing of materials on hand as applicable, and such supporting data as may be requested by OWNER.

1.4 MEASUREMENT - GENERAL

A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and Specifications as specified in National Institute of Standards and Technology, Handbook 44.

B. Whenever pay quantities of material are determined by weight, material shall be weighed on scales furnished by CONTRACTOR and certified accurate by state agency responsible. Weight or load slip shall be obtained from weigher and delivered to CONSTRUCTION MANAGER or OWNER's representative at point of delivery of material.

C. If material is shipped by rail, car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff, and provided further that car weights will not be acceptable for material to be passed through mixing plants.

D. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by CONSTRUCTION MANAGER. Each vehicle shall bear a plainly legible identification mark.

E. Materials that are specified for measurement by the cubic yard measured in the vehicle shall be hauled in vehicles of such type and size that actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its water level capacity. Vehicles shall be loaded to at least their water level capacity. Loads hauled in vehicles not meeting above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to rejection, and no compensation will be allowed for such material.

F. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings. Variations of 1 foot or less will be ignored, and profiles shown on Drawings will be used for determining quantities.

G. Units of measure shown on Bid Form shall be as follows, unless specified otherwise. All methods of measurement shall be approved by the CONSTRUCTION MANAGER.

Item	Method of Measurement
AC	Acre - Field Measure
AS	Assembly
CY	Cubic Yard - Field Measure within limits specified or shown, or measured in vehicle by volume, as specified
EA	Each - Field Count
GAL	Gallon - Field Measure
GM	Gross Mile
HR	Hour
LB	Pound(s) - Weight Measure by Scale
LF	Linear Foot - Field Measure
LS	Lump Sum - Unit is one; no measurement will be made
SF	Square Foot
SY	Square Yard
TN	Ton - Weight Measure by Scale (2,000 pounds)

1.5 PAYMENT

A. General:

a. Progress payments will be made monthly.

b. The date for CONTRACTOR's submission of monthly Application for Payment.

1.6 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

A. Payment will not be made for following:

a. Loading, hauling, and disposing of rejected or unused material.

b. Quantities of material wasted or disposed of in manner not called for under Contract Documents.

c. Rejected loads of material, including material rejected after it has been placed by reason of failure of CONTRACTOR to conform to provisions of Contract Documents.

d. Material not installed.

e. Defective Work not accepted by OWNER.

f. Material remaining on hand after completion of Work.

1.7 MOBILIZATION (ITEM #1)

A. See Section 01505, Mobilization, for payment limitations. All environmental compliance matters except for erosion control system shall be included in Mobilization. Mobilization includes, but is not limited to, bonds, videos, insurance, site cleanup, sanitary facilities, labor associated with permit acquisition, contractors staging area, project signs, project coordination, and demobilization.

B. Payment for mobilization will be made at a lump sum price named in the Bid Schedule. Payment for mobilization will be made in equal monthly amounts during the duration of the original contract time. Mobilization costs not to exceed 10% of the construction costs.

1.8 MAINTENANCE OF TRAFFIC (M.O.T.) (ITEM #2)

A. See Section 01570, Traffic Regulations, and all other references to traffic control and maintenance, as well as parking control and maintenance in this document and any regulatory requirements.

B. Payment for maintenance of traffic will be made at a lump sum price named in the Bid Schedule. Payment for maintenance of traffic and parking activities will be made in equal monthly amounts during the duration of the original contract time. MOT fees not to exceed 10% of the construction costs.

1.9 SEDIMENT BARRIER (ITEM #3)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of sediment barrier installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the sediment barrier in accordance with the plans and specifications.

1.10 INLET PROTECTION SYSTEM (ITEM #4)

A. Payment for this item shall be made at the Contractor's Unit Price per each of inlet protection installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to furnish, install and maintain the inlet protection system in accordance with the plans and specifications.

1.11 CLEARING AND GRUBBING (ITEM #5)

A. Payment for this item shall be made on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for all excavation necessary within the road right of way including debris removal, grading, and any other required clearing and grubbing in accordance with the plans and specifications, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.

B. The Contractor shall remove and dispose of all bushes, trees, stumps, roots, fill material, debris, and other such protruding objects, appurtenances, fences, or any other facilities to prepare the area within the Right-of Way for construction of the proposed improvements.

C. The Contractor shall take the necessary precautions to protect existing landscape, fencing, above ground appurtenances, etc. which are determined to remain in place or relocated, by the CEI.

D. This item shall include root pruning, and the relocation of all mailboxes, signs, walls, fencing, meter boxes, trees, and other such appurtenances that conflict with the proposed improvements or is shown to be relocated.

1.12 REMOVAL OF EXISTING CONCRETE (ITEM #6)

A. Payment for this item shall be made at the Contractor's Unit Price per square yard of material excavated. The Contractor's unit price shall include full compensation for all removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material, Trench Safety Compliance and removal of all extraneous excavated materials in accordance with the plans and specifications.

1.13 MILLING EXISTING ASPHALT PAVEMENT, 1" AVERAGE DEPTH (ITEM #7)

A. Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 1" removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 1" asphaltic concrete in accordance with the plans and specifications.

1.14 MILLING EXISTING ASPHALT PAVEMENT, 2.5" AVERAGE DEPTH (ITEM #8)

A. Payment for this item shall be made at the Contractor's Unit Price square yard of milling existing asphalt pavement, 2.5" removed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to remove 2.5" asphaltic concrete in accordance with the plans and specifications.

1.15 SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (PG76-22) (ITEM #9)

A. Payment for this item shall be made at the Contractor's Unit Price per ton of Superpave Asphaltic Concrete installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Superpave Asphaltic Concrete in accordance with the plans and specifications.

B. Payment shall be made for Superpave Asphaltic Concrete constructed or replaced by authorization of the Consultant. Any Super Asphaltic Concrete that is damaged

incidental to construction or defective shall be replaced at the Contractor's expense.

1.16 INLETS, MANHOLES (ITEM #10-14)

Inlets, Curb, Type P-6, <10’
Inlets, DT Bot, Type C, <10’
Inlets, DT Bot, Type E, <10’
Manholes, P-8, <10’
Manhole, Adjust

A. Payment for this item shall be made at the Contractor's Unit Price per each inlet, manhole, or junction structure installed and accepted. The Contract Unit Price shall include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, pollution retardant baffles, grout, brick, shoring, trenching, equipment or any other items required to install the inlets, manholes, or junction structure complete in place in accordance with the plans and specifications.

B. Payment shall be made for each inlet, manhole, or junction structure installed by authorization of the Consultant. Any inlet, manhole, or junction structure that are damaged incidental to construction or defective shall be repaired at the Contractor's expense.

1.17 MANHOLE, ADJUST, UTILITIES (ITEM #15)

A. Payment for this item shall be made at the Contractor's Unit Price per each of manhole adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust manholes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.

1.18 VALVE BOXES, ADJUST (ITEM #16)

A. Payment for this item shall be made at the Contractor's Unit Price per each of valve adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust valves shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.

1.19 METER BOXES, ADJUST (ITEM #17)

A. Payment for this item shall be made at the Contractor's Unit Price per each of meter box adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust meter boxes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.

1.20 PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 12" S/CD (ITEM #18)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot

of pipe installed and accepted. The Contract Unit Price shall include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, grout, brick, shoring, trenching, equipment or any other items required to install the pipe complete in place in accordance with the plans and specifications.

B. Payment shall be made for 12” pipe culvert installed by authorization of the Consultant. Any 12” pipe culvert that is damaged incidental to construction or defective shall be repaired at the Contractor's expense.

1.21 PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" S/CD (ITEM #19)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of pipe installed and accepted. The Contract Unit Price shall include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, grout, brick, shoring, trenching, equipment or any other items required to install the pipe complete in place in accordance with the plans and specifications.

B. Payment shall be made for 18” pipe culvert installed by authorization of the Consultant. Any 18” pipe culvert that is damaged incidental to construction or defective shall be repaired at the Contractor's expense.

1.22 PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" S/CD (ITEM #20)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of pipe installed and accepted. The Contract Unit Price shall include compensation for all labor, material, hardware, caulking, cutting and connecting existing pipes, grout, brick, shoring, trenching, equipment or any other items required to install the pipe complete in place in accordance with the plans and specifications.

B. Payment shall be made for 24” pipe culvert installed by authorization of the Consultant. Any 24” pipe culvert that is damaged incidental to construction or defective shall be repaired at the Contractor's expense.

1.23 CONCRETE CURB & GUTTER, TYPE F (ITEM #21)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of concrete curb installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the concrete curb complete in place in accordance with the plans and specifications.

B. Payment shall be made for Concrete Curb constructed or replaced by authorization of the Consultant. Any Concrete Curb that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.24 CONCRETE SIDEWALK AND DRIVEWAYS, 6” THICK (ITEM #22)

A. Payment for this item shall be made at the Contractor's Unit Price per square yard of) concrete sidewalk and driveway (6” thick) installed and accepted. The Contract

Unit Price shall include compensation for all labor, material, and equipment required to install the concrete sidewalk or driveway in accordance with the plans and specifications.

B. Payment shall be made for Concrete Sidewalk and Driveway (6” Thick) constructed or replaced by authorization of the Consultant. Any Concrete Sidewalk and Driveway (6” Thick) that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.25 PATTERNED PAVEMENT, VEHICULAR AREAS (ITEM #23)

A. Payment for this item shall be made at the Contractor's Unit Price per square yard of patterned pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, equipment or any other items required to install the patterned pavement in accordance with the plans and specifications.

B. Payment shall be made for Patterned Pavement, Vehicular Areas constructed or replaced by authorization of the Consultant. Any patterned pavement that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.26 DETECTABLE WARNINGS (ITEM #24)

A. Payment for this item shall be made at the Contractor's Unit Price per square foot of detectable warning installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the detectable warning in accordance with the plans and specifications.

B. Payment shall be made for Detectable Warning constructed or replaced by authorization of the Consultant. Any Detectable Warning that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.27 PERFORMANCE TURF, SOD (ITEM #25)

A. Payment for this item shall be made on a square yard basis. The Contractor's unit price shall include full compensation for all sodding within the road right of way as indicated on the plans.

B. The Contractor's unit price shall constitute full compensation for all labor, materials, and equipment required for excavation, grading, hauling, placing, compacting, and dressing of the surface of the swales in preparation for sodding, placement, and establishment. Any sod that is damaged incidental to construction or defective shall be replaced at the Contractor’s expense.

C. Includes 2” of independent topsoil.

1.28 PULL & SPLICE BOX, F&I, 13” X 24” COVER SIZE (ITEM #26)

A. Payment for this item shall be made at the Contractor's Unit Price per each pull box installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the pull box in accordance with the plans and specifications.

1.29 UTILITY FIXTURE, METER BOX, ADJUST (ITEM #27)

A. Payment for this item shall be made at the Contractor's Unit Price per each of meter box adjustments installed and accepted. The Contract Unit Price shall include compensation for labor, material, and equipment required to adjust meter boxes shown in the Plans to be adjusted or requiring adjustment for the satisfactory completion of the work.

1.30 MIDBLOCK CROSSWALK: REC RAPID FLASHING BEACON, FURNISH/INSTALL – SOLAR, SIGN ASSEMBLY, SINGLE DIR. ACCESSIBLE DETECTOR (ITEM #28)

A. Payment for this item shall be made at the Contractor's Unit Price per sign assembly furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications.

B. Payment shall be made for Single Post Sign Assembly installed by authorization of the Consultant. Any signs that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.31 SINGLE POST SIGN, F & I GROUND MOUNT UP TO 12 SF (ITEM #29)

A. Payment for this item shall be made at the Contractor's Unit Price per each sign assembly furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Sign Assemblies in accordance with the plans and specifications.

B. Payment shall be made for each Single Post Sign Assembly installed by authorization of the Consultant. Any signs that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.32 SINGLE POST SIGN, RELOCATE (ITEM #30)

A. Payment for this item shall be made at the Contractor's Unit Price per each sign assembly relocated and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.

B. Payment shall be made for each Single Post Sign Assembly relocated by authorization of the Consultant. Any signs that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.33 SINGLE POST SIGN, REMOVE (ITEM #31)

A. Payment for this item shall be made at the Contractor’s Unit Price per each sign assembly removed. The Contractor's unit price shall include full compensation for all removing and disposing of existing sign panels, posts and ground attachments, where required because of construction operations, where the work is NOT included in other operations, labor, equipment, and materials required to complete the work in accordance with the plans and specifications. This unit pricing includes cost of legal disposal of all deleterious material and removal of all extraneous materials in accordance with the plans and specifications.

1.34 ENHANCED HIGHWAY SIGN ASSEMBLY, SOLAR POWERED, RELOCATE – GROUND MOUNT (ITEM #32)

A. Payment for this item shall be made at the Contractor's Unit Price per each sign assembly relocated and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to relocate the Sign Assemblies in accordance with the plans and specifications.

B. Payment shall be made for each Enhanced Highway Sign Assembly relocated by authorization of the Consultant. Any signs that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.35 OBJECT MARKER, TYPE 1 (ITEM #33)

A. Payment for this item shall be made at the Contractor's Unit Price per each object marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the object markers in accordance with the plans and specifications.

B. Payment shall be made for each Object Marker installed by authorization of the Consultant. Any object markers that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.36 RAISED PAVEMENT MARKER, TYPE B (YELLOW/YELLOW) (BLUE/BLUE) (ITEM #34-35)

A. Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.

B. Payment shall be made for each Raised Pavement Marker installed by authorization of the Consultant. Any Raised Pavement Marker that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.37 RAISED PAVEMENT MARKER, TYPE F INTERNALLY ILLUMINATED (ITEM #36)

A. Payment for this item shall be made at the Contractor's Unit Price per each Raised Pavement Marker furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the Raised Pavement Marker in accordance with the plans and specifications.

B. Payment shall be made for each Raised Pavement Marker installed by authorization of the Consultant. Any Raised Pavement Marker that are damaged incidental to construction shall be replaced at the Contractor's expense.

1.38 PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW ISLAND NOSE (ITEM #37)

A. Payment for this item shall be made at the Contractor's Unit Price per square foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for each square foot of Painted Pavement Markings, Standard, Yellow Island Nose installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.39 PAINTED PAVEMENT MARKINGS, FINAL SURFACE (ITEM #38)

A. Payment for this item shall be made on a Lump Sum Basis. The Contractor's unit price shall include full compensation for the painted pavement markings including, striping, messages, symbols, arrows or other similar pavement markings in accordance with the specifications.

1.40 THERMOPLASTIC, STANDARD, PAVEMENT STRIPING (ITEM #39-40)
711-11123 – Thermoplastic, Standard, White, Solid, 12” for Crosswalk and Roundabout
711-11125 – Thermoplastic, Standard, White, Solid, 24” for Stop Line and Crosswalk

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for each linear foot of Thermoplastic, Standard, Pavement Striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.41 THERMOPLASTIC, STANDARD, WHITE, VERTICAL DEFLECTION MARKING (ITEM #41)

A. Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with

the plans and specifications.

B. Payment shall be made for each marking installed by authorization of the Consultant. Any marking that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.42 THERMOPLASTIC, STANDARD WHITE, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6” (ITEM #42)

A. Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction shall be replaced at the Contractor's expense.

1.43 THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL (ITEM #43)

A. Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.

B. Payment shall be made for each marking installed by authorization of the Consultant. Any marking that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.44 THERMOPLASTIC, STANDARD, WHITE, YIELD LINE (ITEM #44)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for each linear foot of Thermoplastic, Standard, Pavement Striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.45 THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18” FOR DIAGONAL OR CHEVRON (ITEM #45)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for each linear foot of Thermoplastic, Standard, Pavement Striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.46 THERMOPLASTIC, STANDARD YELLOW, 2-4 DOTTED GUIDELINE/6-10 GAP EXTENSION, 6” (ITEM #46)

A. Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction shall be replaced at the Contractor's expense.

1.47 THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24” FOR CROSSWALK (ITEM #47)

A. Payment for this item shall be made at the Contractor's Unit Price per linear foot of striping installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for each linear foot of Thermoplastic, Preformed, Pavement Striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.48 THERMOPLASTIC, PREFORMED, WHITE, MESSAGE (ITEM #48)

A. Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.

B. Payment shall be made for each marking installed by authorization of the Consultant. Any marking that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.49 THERMOPLASTIC, PREFORMED, WHITE, ARROW (ITEM #49)

A. Payment for this item shall be made at the Contractor's Unit Price per each marking installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the marking in accordance with the plans and specifications.

B. Payment shall be made for each marking installed by authorization of the Consultant. Any marking that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

1.50 THERMOPLASTIC, STANDARD – OTHER SURFACES, WHITE, SOLID 6” (ITEM #50)

A. Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction shall be replaced at the Contractor's expense.

1.51 THERMOPLASTIC, STANDARD – OTHER SURFACES, YELLOW, SOLID 6” (ITEM #51)

A. Payment for this item shall be made at the Contractor's Unit Price per gross mile furnished and installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the striping in accordance with the plans and specifications.

B. Payment shall be made for striping installed by authorization of the Consultant. Any striping that is damaged incidental to construction shall be replaced at the Contractor's expense.

1.52 GREEN COLORED PAVEMENT MARKINGS, BIKE LANE (ITEM #52)

A. Payment for this item shall be made at the Contractor's Unit Price per square foot of green colored pavement installed and accepted. The Contract Unit Price shall include compensation for all labor, material, and equipment required to install the green colored pavement in accordance with the plans and specifications.

B. Payment shall be made for each square foot of Green Colored Pavement Markings, Bike Lane installed by authorization of the Consultant. Any colored pavement that is damaged incidental to construction or defective shall be replaced at the Contractor's expense.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01031 – ALTERATION PROJECT PROCEDURES

PART 1 GENERAL

1.1 REQUIREMENTS

A. Coordinate work of trades and schedule elements of alterations and renovation work by procedure and methods to expedite completion of the work.

B. In addition to demolition and that specifically shown, cut, move or remove items necessary to provide access or to allow alterations and new work to proceed. Include such items as:

a. Repair or removal of hazardous or unsanitary conditions.

b. Removal of abandoned items and items serving no useful purpose, such as abandoned piping, conduit and wiring.

c. Removal of unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, rusted metals and deteriorated concrete, shall be removed from the site expeditiously.

d. Cleaning of surfaces and removal of surface finished as needed to install new work and finishes.

e. Protection as required for existing trees to remain.

f. For purposes of all existing underground utilities work, coordinate as required by use of special telephone number shown on engineering drawings.

g. Site storage for all existing benches, signals, signs, light poles, fire hydrants, manhole covers and grates to be relocated.

C. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a professional transition to adjacent new items of construction.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 ALTERATIONS, CUTTING AND PROTECTION

A. Assign the work of moving, removal, cutting, patching and protection to trades qualified to perform the work in a manner to cause least damage to each type of

work, and provide means of returning surfaces to appearance of new work.

B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.

a. Cut finish surfaces such as paving, masonry, tile, plaster or metals, by methods to terminate surfaces in a straight line at a natural point of division.

C. Perform cutting and patching as specified in Section 01045.

D. Protect existing finishes, equipment, and adjacent work which are scheduled to remain, from damage.

a. Protect existing and new work from weather and extremes of temperature.

PART 2 PRODUCTS

2.1 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING

A. General Requirements that work be complete:

a. Provide same products or types of construction as that in existing structure, as needed to patch, extend or match existing work.

i. Generally, Contract Documents will not define products or standards of working conduct present in existing construction; CONTRACTOR shall determine products in inspection and any necessary testing by use of the existing as a sample of comparison.

b. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed as necessary to make work complete and consistent to existing identical standards of quality.

PART 3 EXECUTION

3.1 PERFORMANCE

A. Patch and extend existing work using skilled mechanics who are capable of matching existing quality. Quality of patched or extended work shall be not less than that specified for new work.

3.2 DAMAGED SURFACES

A. Patch and replace any portion of an existing finished surface with the exception of concrete curb or gutter which is found to be damaged, lifted, discolored, or shows other imperfections. Damaged curbing shall be replaced in sections as directed by the engineer.

a. Provide adequate support of substrate prior to patching the finish.

b. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.

c. When existing surface finish cannot be matched, refinish entire surface to nearest intersections.

3.3 TRANSITION FROM EXISTING TO NEW WORK

A. When new work abuts or is finished flush with existing work, make a smooth transition. Patched work shall match existing adjacent work in texture and appearance so that the patch of transition is invisible at a distance of five feet.

a. When finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

3.4 CLEANING

A. Perform periodic and final cleaning as specified in Section 01710.

a. Clean OWNER-occupied areas daily.

b. Clean spillage, overspray, and heavy collection of dust in OWNER occupied areas immediately.

B. At completion of work of each trade, clean area and make surfaces ready for work of successive trades.

C. At completion of alterations work in each area, provide final cleaning and return space to a condition suitable for use by OWNER.

3.5 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work in this section. Payment for work shall be included in all other work.

END OF SECTION

SECTION 01040 – COORDINATION

PART 1 GENERAL

1.1 SUBMITTALS

A. Informational

a. Statement of Qualification (SOQ) for land surveyor or civil engineer.

b. Statement of Qualification (SOQ) for professional videographer.

B. Photographs

a. Color Prints

i. Submit two copies, accompanied by negatives or digital files, within 5 days of being taken.

b. Video Recordings

i. Submit two copies within 5 days of being taken.

1.2 UTILITY NOTIFICATION AND COORDINATION

A. Coordinate the Work with various utilities within Project limits. Notify applicable utilities prior to commencing Work.

B. Contact the City of Fort Lauderdale Public Services Department at 954-828-8000 for water and sewer utility locations.

C. Contact Sunshine State One Call at 1-800-432-4770 at least 2 business days prior to any excavation.

D. If damage occurs, or if conflicts or emergencies arise during Work, contact the appropriate utility.

a. American Traffic Solutions
- Contact Person: Santiago Martinez
- Telephone: 480-596-4595

b. AT&T Distribution
- Contact Person: Henry Urena
- Telephone: 954-260-0615

c. Broward County Traffic Engineering Division
- Contact: Robert Blount
- Telephone: 954-847-2745

d. Broward County Water and Wastewater Services
- Contact Person: George Lopez
- Telephone: 954-859-1510

e. Centurylink/Level 3
- Contact: Francisco Azuri
  Telephone: 786-266-1713

f. City of Fort Lauderdale
- Contact Person: Axel Rivera
- Telephone: 754-828-5124

g. Comcast
- Contact Person: Justin Cassell
- Telephone: 786-427-4049

h. FDOT District IV ITS/Interstate Fiber
- Contact Person: Dahlia Hightower
- Telephone: 954-847-2690

i. FDOT District IV ITS/Arterial Fiber
- Contact Person: Alex Garcia
- Telephone: 954-847-1996

j. Fiberlight, LLC/Atlantic Broadband/Breezline
- Contact Person: Javares Hall
- Telephone: 305-213-9908

k. Fibernet Direct (Crown Castle)
- Contact Person: Danny Haskett
- Telephone: 786-610-7073

l. FPL Distribution
- Contact Person: Byron A. Sample
- Telephone: 954-401-4584

m. MCI/Verizon
- Contact Person: Todd Mars
- Telephone: 786-236-8597

n. TECO Peoples Gas
- Contact Person: Max Chamorro
- Telephone: 954-453-0812

o. Verra Mobility
- Contact Person: Victoria Grasser
- Telephone: 480-689-8989

1.3 PROJECT MEETINGS

A. General

a. Contractor: Schedule physical arrangements for meetings throughout progress of Work, prepare meeting agenda with City/Construction Manager and Contractor input and distribute with written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions, and reproduce and distribute copies minutes after each meeting to participants and parties affected by meeting decisions.

b. Representatives of City/Construction Manager, Contractor and Subcontractors shall attend meetings as needed.

B. Preconstruction Conference

i. Contractor shall be prepared to discuss the following subjects, as a minimum:

i. Required schedules.

ii. Status of Bonds and insurance.

iii. Sequence of critical path work items.

iv. Project changes and clarification procedures.

v. Use of site, access, office and storage areas, security and temporary facilities.

vi. Major project delivery and priorities.

vii. Contractor's safety plan and representative.

viii. Progress payment procedures.

ii. Attendees may include but not limited to:

i. City's representatives

ii. Contractor's office representative

iii. Contractor's resident superintendent

iv. Contractor's quality control representative

v. Subcontractor's representatives whom Contractor may desire, or City may request to attend.

vi. Engineer's representatives.

vii. Others as appropriate.

c. Preliminary Schedules Acceptability Review Meeting: As required to review and finalize Preliminary Schedule.

C. Progress Meetings

a. Contactor will schedule regular progress meetings at site, conducted weekly to review Work progress, progress schedule, Shop Drawing and Sample submissions schedule, Application for Payment, contract modifications, and other matters needing discussion and resolution.

b. Attendees will include

i. City's representatives, as appropriate.

ii. Contractor, Subcontractors and Suppliers, as appropriate.

iii. Others as appropriate.

c. On a monthly basis, the will conduct a meeting to review work completed the previous month versus the Progress Schedule, work planned for upcoming month based on the Progress Schedule, the monthly Application for Payment, and any outstanding issues related to performance of the Work including pending contract modifications, requests for clarification, Shop Drawings, etc. All parties will attend the monthly meeting.

D. Pre-installation Meetings

a. When required in individual Specification sections or as necessary to coordinate the Work, convene at site prior to commencing Work of that section.

b. Require attendance of entities directly affecting, or affected by, Work of that section.

c. Notify City/Construction Manager 4 days in advance of meeting date.

d. Provide suggested agenda to City/Construction Manager to include reviewing conditions of installation, preparation and installation or application procedures, and coordination with related Work and work of others.

E. Other Meetings

a. In accordance with the Contract Documents and as may be required by the City and Engineer.

1.4 FACILITY OPERATIONS

A. Continuous operation of City's facilities is of critical importance. Schedule and conduct activities to enable existing facilities to operate continuously, unless otherwise specified.

B. Perform Work continuously during critical connections and changeovers, and as required to prevent interruption of City's operations.

C. When necessary, plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items to maintain continuous operations of City's facilities.

D. Do not close lines, open or close valves, or take other action which would affect the operation of existing systems, except as specifically required by the Contract Documents and after authorization by City and Engineer. Such authorization will be considered within 48 hours after receipt of Contractor's written request.

E. Provide **7** days advance written request for approval of need to shut down a process or facility to City/Construction Manager.

F. Power outages will be considered upon 48 hours written request to City. Describe the reason, anticipated length of time, and areas affected by the outage. Provide temporary provisions for continuous power supply to critical facility components.

G. Do not proceed with Work affecting a facility's operation without obtaining City's advance approval of the need for and duration of such Work.

H. Relocation of Existing Facilities:

a. During construction, it is expected that minor relocations of Work will be necessary.

b. If Contractor determines that in order to expedite construction of the median improvements it would be necessary to temporarily remove and replace existing water services and/or sewer service connections, he will be responsible for the removal and replacement of such service connections at his own cost and effort. The City will not provide additional compensation for any costs associated with such effort. All labor and material costs associated with means and methods of construction will be compensated as part of the bid item(s) cost submitted by the Contractor. Additionally, the Contractor will have to coordinate and inform utility owner(s) and any City resident(s) impacted by such activities and must repair such utilities in a timely manner to minimize disruption of service.

c. Provide complete relocation of existing structures and Underground Facilities, including piping, utilities, equipment, structures, electrical conduit wiring, electrical duct bank, traffic loop detectors and other necessary items.

d. Use only new materials for relocated facility. Match materials of existing facility, unless otherwise shown or specified.

e. Perform relocations to minimize downtime of existing facilities.

f. Install new portions of existing facilities in their relocated position prior to removal of existing facilities, unless otherwise accepted by City.

1.5 BYPASS PUMPING

A. Where the Work includes connections or modifications to existing sanitary sewer systems, wastewater flows shall be controlled through the pipeline sections and pump stations where work is being performed. Under no circumstances, can portions of the system be removed from service for periods of time in excess of that approved by the City. The Contractor shall be responsible to assess conditions and capacities of the existing sewer lines and pump stations in order to implement an acceptable bypass plan at no additional cost to the City. Bypass pumping will be required for all sewers and pump station construction that would result in shutdown of existing facilities. The Contractor shall supply the necessary pumps, conduits, and other equipment to not only divert flow around the pump station, manhole, or pipe section in which work is to be performed, but also to transmit the flow in downstream sewer lines and/or pump stations without surcharge. The bypass systems shall be of sufficient capacity to handle existing flows plus additional flows that may occur during periods of high tide or rainfall. Emergency backup pumping capability must be available in addition to the primary bypass system. The Contractor will be responsible for furnishing the necessary labor, power, and supervision to set
up and operate the pumping and bypass systems. When pumping is in operation, all engines shall be equipped in a manner to keep the pump noise to a minimum and to comply with applicable noise ordinances.

B. Contractor shall be responsible for any damage to properties or buildings connected to the sewer system, and to the pipeline, which result from the flow control activities.

C. Contractor shall submit a bypass pumping plan for all proposed bypass pumping operations.

1.6 PHYSICAL CONDITIONS

A. Exercise reasonable care to verify locations of existing subsurface structures and underground facilities.

B. Thoroughly check immediate and adjacent areas subject to excavation by

visual examination (and by electronic metal and pipe detection equipment, as necessary) for indications of subsurface structures and underground facilities.

C. Make exploratory excavations where existing underground facilities or structures may potentially conflict with proposed underground facilities or structures. Conduct exploratory excavations in presence of Engineer and sufficiently ahead of construction to avoid possible delays to Contractor's Work.

1.7 ADJACENT FACILITIES AND PROPERTIES

A. Examination

a. After Effective Date of the Agreement and before Work at site is started, Contractor, City/Construction Manager, and affected property owners and utility owners shall make a thorough examination of pre-existing conditions including existing buildings, structures, and other improvements in vicinity of Work, as applicable, which could be damaged by construction operations.

b. Periodic reexamination shall be jointly performed to include, but not limited to, cracks in structures, settlement, leakage, and similar conditions.

B. Documentation

a. Record and submit documentation of observations made on examination inspections in accordance with paragraphs Construction Photographs and Audio-Video Recordings.

b. Upon receipt, Engineer will review, sign, and return one record copy of documentation to Contractor to be kept on file in field office.

c. Such documentation shall be used as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and is for the protection of adjacent property owners, Contractor, and City.

1.8 CONSTRUCTION PHOTOGRAPHS

A. Photographically document all unique portions of the construction including tie- insto existing pipelines or facilities, crossings of existing utilities, buried valve and piping intersections, and other work items that will not otherwise be visible after completion of construction.

B. Film or file handling and development shall be done by a commercial laboratory.

C. City and Engineer shall have the right to select the subject matter and vantage point from which photographs are to be taken.

D. Construction Progress Photos

a. Photographically demonstrate progress of construction, showing every aspect of site and adjacent properties as well as interior and exterior of new or impacted structures.

b. Monthly: Take 24 exposures using 35 mm color film or digital photographs of comparable quality, unless otherwise approved by the PCM.

E. Color Prints

a. Minimum Size: 3-inch by 5-inch.

b. Finish: Glossy.

c. Label Each Print:

i. Project Name.

ii. Date and time photo was taken.

iii. Photographer's name.

iv. Caption (maximum 30 characters).

v. Location and area designation.

vi. Schedule activity number, as appropriate.

d. Assemble in bound albums in clear plastic sleeves that facilitate viewing both front and back of each photograph.

e. Assemble negatives in their corresponding album in clear plastic sleeves made for the purpose or on recordable CD media organized by project segment.

1.9 AUDIO-VIDEO RECORDINGS

A. Prior to beginning Work on construction site or of a particular area of the Work, and again within 10 days following date of Substantial Completion, videograph construction site and property adjacent to construction site.

B. In the case of preconstruction recording, no Work shall begin in the area prior to City/Construction Manager's review and approval of content and quality of video for that area.

C. Particular emphasis shall be directed to physical condition of existing vegetation, structures, and pavements within pipeline alignment and areas adjacent to and within the right-of-way or easement, and on Contractor storage and staging areas.

D. City/Construction Manager and Engineer shall have right to select subject matter and vantage point from which videos are to be taken.

E. Videotaping shall be by a professional commercial videographer, experienced in shooting construction videos.

F. Video Format and Quality

a. Digital video with sound (flash drive or external drive).

b. Video

i. Produce bright, sharp, and clear images with accurate colors, free of distortion and other forms of picture imperfections.

ii. Electronically, and accurately display the month, day, year, and time of day of the recording.

c. Audio

i. Audio documentation shall be done clearly, precisely, and at a moderate pace.

ii. Indicate date, Project name, and a brief description of the location of taping, including

a. Facility name;

b. Street names or easements;

c. Addresses of private property; and

d. Direction of coverage, including engineering stationing, if applicable.

G. Documentation

a. Provide two copies to the City.

b. Flash Drive/ External Drive Label:

i. Flash Drive/External Drive number (numbered sequentially, beginning with 001).

ii. Project Name.

iii. Name of street(s) or easement(s) included.

iv. Applicable location by engineering stationing.

v. Date and time of coverage.

c. Project Flash Drive/External Drive Log: Maintain an ongoing log that incorporates above noted label information for Flash Drive/External Drive on Project.

H. The Following Shall be Included with the Video Documentation

a. Coverage is required within and adjacent to the rights-of-way, easements, storage, and staging areas where the work is being constructed.

b. Documentation of the conditions of the adjacent properties or any affected structures as a result of the impending construction.

c. Certification as to date work done and by whom.

d. All videos shall be keyed to the construction drawings, provided with an index and a written narrative.

I. Preconstruction and Post-Construction Videos Shall be Submitted as follows:

a. Preconstruction videos shall be presented to the City at the preconstruction conference.

b. Post-construction videos shall be submitted prior to final project closeout. This submittal is contingent to final payment.

J. Payment for the work in this Section will be included as part of the lump sum price for mobilization/demobilization.

1.10 REFERENCE POINTS, SURVEYS, AND RECORD DRAWINGS

A. Location and elevation of benchmarks are shown on Drawings.

B. Contractor's Responsibilities:

a. Provide all survey efforts required to layout the Work.

b. Check and establish exact location of existing facilities prior to construction of new facilities and any connections thereto.

c. In event of discrepancy in data or benchmarks, request clarification before proceeding with Work.

d. Retain a professional land surveyor or civil engineer registered in the State of Florida who shall perform or supervise all surveying necessary for construction staking and layout and obtaining record information for as-built and record drawing preparation.

e. Maintain complete accurate log of survey Work as it progresses as a Record Document. The Contractor is responsible for the quality control of horizontal location and vertical elevations of the installed project.

f. On request of City/Construction Manager, submit documentation.

g. Provide competent employee(s), tools, stakes, and other equipment and materials as City/Construction Manager may require to:

i. Establish control points, lines, and easement boundaries.

ii. Check layout, survey, and measurement Work performed by others.

iii. Measure quantities for payment purposes.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 CUTTING, FITTING, AND PATCHING

A. Cut, fit, adjust, or patch Work and work of others, including excavation and backfill as required, to make Work complete.

B. Obtain prior written authorization of Engineer before commencing Work to cut or otherwise alter:

a. Structural or reinforcing steel, structural column or beam, elevated slab, trusses, or other structural member.

b. Weather **-** or moisture-resistant elements.

c. Efficiency, maintenance, or safety of element.

d. Work of others.

C. Refinish surfaces to provide an even finish.

a. Refinish continuous surfaces to nearest intersection.

b. Refinish entire assemblies.

c. Finish restored surfaces to such planes, shapes, and textures that no transition between existing work and Work is evident in finished surfaces.

i. Restore existing work, Underground Facilities, and surfaces that are to remain in completed Work including concrete-embedded piping, conduit, and other utilities as specified and as shown.

ii. Make restorations with new materials and appropriate methods as specified for new Work of similar nature; if not specified, use recommended practice of manufacturer or appropriate trade association.

END OF SECTION

SECTION 01045 – CUTTING AND PATCHING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the work or to:

a. Make its several parts fit together properly.

b. Uncover portions of the work to provide for installation of ill-timed work.

c. Remove and replace defective work.

d. Remove and replace work not conforming to requirements of Contract Documents.

e. Remove samples of installed work as specified for testing.

f. Provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 SUBMITTALS

A. Submit a written request to ENGINEER well in advance of executing any cutting or alteration, which affects:

a. Work of the OWNER or any separate CONTRACTOR.

b. Structural value of integrity of any element of the project.

c. Integrity of effectiveness of weather-exposed or moisture-resistant elements or systems.

d. Efficiency, operational life, maintenance or safety of operational elements.

e. Visual qualities of sight-exposed elements.

B. Request shall include:

a. Identification of the project.

b. Description of the affected work.

c. The necessity for cutting, alteration or excavation.

d. Effect on work of OWNER or any separate CONTRACTOR, or on structural or weatherproof integrity of project.

e. Description of proposed work

i. Scope of cutting, patching, alteration, or excavation.

ii. Trades who will execute the work.

iii. Products proposed to be used.

iv. Extent of refinishing to be done.

f. Alternatives to cutting and patching.

g. Cost proposal, when applicable.

h. Written permission of any separate CONTRACTOR whose work will be affected.

C. Should conditions of work or the schedule indicate a change of products from original installation, CONTRACTOR shall submit request for substitution as specified in Section 01600, paragraph 1.08.

D. Submit written notice to ENGINEER designating the date and time the work will be uncovered.

PART 2 PRODUCTS

2.1 MATERIALS

A. Comply with specifications and standards for each specific product involved.

PART 3 EXECUTION

3.1 INSPECTION

A. Inspect existing conditions of project, including elements subject to damage or to movement during cutting and patching.

B. After uncovering the work, inspect conditions affecting installation of products, or performance of work.

C. Report unsatisfactory or questionable conditions affecting installation of products, or performance of work.

3.2 PREPARATION

A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of work.

B. Provide devices and methods to protect other portions of project from damage.

C. Provide protection from elements for that portion of the project, which may be exposed by cutting and patching, work, and maintain excavations free from water.

3.3 PERFORMANCE

A. Execute cutting and demolition by methods, which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.

B. Execute excavating and backfilling by methods, which will prevent settlement or damage to other work.

C. Employ original Installer or Fabricator to perform cutting and patching for:

a. Weather-exposed or moisture-resistant elements.

b. Sight-exposed finished surfaces.

D. Execute fitting and adjustment of products to provide a finished installation to comply with specified product, functions, tolerances and finishes.

E. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.

F. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.

G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:

a. For continuous surfaces, refinish to nearest intersection.

b. For an assembly, refinish entire unit.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the unit price bid of any item requiring cutting and patching, including pavement restoration.

END OF SECTION

SECTION 01050 – PROJECT MANAGEMENT

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:

a. Coordination Drawings.

b. Special Project Procedures

c. Administrative and supervisory personnel.

d. Project meetings.

e. Requests for Information (RFIs).

B. Related Sections include the following:

a. Section 01200, “Project Meetings”

b. Section 01311, "Construction Progress Documentation"

c. Section 01340, "Submittal Procedures"

d. Section 01780, "Contract Closeout "

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 o f 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.

a. Schedule construction operations in sequence required to obtain the best

results where installation of one part of the Work depends on installationof other components, before or after its own installation.

b. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.

c. Make adequate provisions to accommodate items scheduled for later installation.

d. 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.

B. Memoranda

a. 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.

i. Prepare similar memoranda for City and separate contractors if coordination of their Work is required.

C. Administrative Procedures

a. 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:

i. Preparation of Contractor's Construction Schedule.

ii. Preparation of the Schedule of Values.

iii. Installation and removal of temporary facilities and controls.

iv. Delivery and processing of submittals.

v. Progress meetings.

vi. Project closeout activities.

1.5 SUBMITTALS

A. Key Personnel Names

a. Within 5 days of notice to proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance

at Project site including:

i. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers.

ii. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.6 SPECIAL PROJECT PROCEDURES

A. Discrepancies, Errors

a. 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.

b. 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.

B. Dimensions and Measurements

a. 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.

b. 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.

c. 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:

a. 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 any alterations, erasures, changes or modifications in the drawings or specifications.

i. 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.

ii. 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. Plans and Specifications Acknowledgment by Subcontractors and Suppliers

a. All Subcontractors and Suppliers must submit, through the General Contractor to the City's Engineer, a statement on their individual letterhead stationary, signed and sealed with their corporate seal, or a notarized statement on their letterhead stationery in the absence of a corporate seal, that the individual Subcontractor or Supplier:

i. Has received or reviewed a FULL set of approved plans and specifications for the project,

ii. Is aware that items concerning their particular trade may be shown and/or detailed in other trades or sections of the plans and specifications, and

iii. Will comply with said plans, specifications and all applicable codes and permit requirements.

E. 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.

F. The Subcontractor will not be permitted to start work, nor will any Shop drawings/submittals be accepted for review from a supplier until this letter of acknowledgment is received and approved by the General Contractor and City's Engineer. Also, the City will not process any pay request for the work of any Subcontractor or Supplier whose acknowledgment letter is not on file with the City.

1.7 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure

a. 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.

i. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.

ii. 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

a. Include a detailed, legible description of item needing interpretation and the following:

i. City Project Number

ii. City Project Name.

iii. Date.

iv. Name of Contractor.

v. RFI number, numbered sequentially.

vi. Specification Section number and title and related paragraphs, as appropriate.

vii. Drawing number and detail references, as appropriate.

viii. Field dimensions and conditions, as appropriate.

ix. 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.

x. Contractor's signature.

xi. 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.

xii. Identify each page of attachments with the RFI number and sequential page number.

C. Software-Generated RFIs

a. Software-generated form with substantially the same content as indicated above.

i. Word Template is available upon request from the City's Engineer's Office.

ii. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Engineer's Action. Engineer will review each RFI, determine action required, and return it. Allow seven working days for Engineer's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

a. The following RFIs will be returned without action:

i. Requests for approval of submittals.

ii. Requests for approval of substitutions.

iii. Requests for coordination information already indicated in the Contract Documents.

iv. Requests for adjustments in the Contract Time or the Contract Sum.

v. Requests for interpretation of Engineer's actions on submittals.

vi. Incomplete RFIs or RFIs with numerous errors.

b. Engineer's action may include a request for additional information, in which case Engineer's time for response will start again.

c. Engineer'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 Division 01 Section "Contract Modification Procedures."

i. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within 10 days of receipt of the RFI response.

E. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.

F. RFI Log.

a. Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Include the following:

i. Project name.

ii. Name and address of Contractor.

iii. RFI number including RFIs that were dropped and not submitted.

iv. RFI description.

v. Date the RFI was submitted.

vi. Date Engineer's response was received.

vii. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01055 – MAINTENANCE OF TRAFFIC

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Construction parking controls.

B. Flares and lights.

C. Haul routes.

D. Traffic signs and signals.

E. Removal.

F. Detour routes.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

A. Drawings and general provisions of the Contract, including the General and Supplementary Conditions and Division 1 Specification sections, apply to this section.

B. Section 01010 – Summary of Work

C. Section 01560 – Temporary Controls

PART 2 PRODUCTS

2.1 SIGNS, SIGNALS, AND DEVICES

A. Post Mounted Traffic Control and Informational Signs: In accordance with FDOT and MUTCD Standards.

PART 3 EXECUTION

3.1 GENERAL

A. Coordinate Maintenance of Traffic with the City of Fort Lauderdale. To the greatest extent possible, vehicular and pedestrian traffic is to be maintained to the existing residences and businesses.

B. Contractor shall provide temporary means of egress by means of boardwalks, temporary sidewalks or other approved equivalent systems to allow access to residences or businesses.

C. Emergency vehicle access to the residences shall be provided at all times.

3.2 CONSTRUCTION PARKING CONTROL

A. Control vehicular parking to prevent interference with public traffic and parking, private property, business, and residential access.

B. Monitor parking of construction personnel's vehicles. Maintain vehicular access to private residences and businesses. Construction parking shall not be allowed in front of residences.

3.3 FLAG PERSONS

A. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

3.4 FLARES AND LIGHTS

A. Use flares and lights during hours of low visibility to delineate project limits.

3.5 HAUL ROUTES

A. Consult with the City of Fort Lauderdale to establish public thoroughfares to be used for haul routes and site access.

B. Confine construction traffic to designated haul routes.

C. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.6 TRAFFIC SIGNS AND SIGNALS

A. At approaches to site and on site, install at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.

B. Relocate as work progresses, to maintain effective traffic control.

3.7 REMOVAL

A. Remove equipment and devices when no longer required.

B. Repair damage caused by installation.

END OF SECTION

SECTION 01060 – REGULATORY REQUIREMENTS & PERMITS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall comply with all building codes appropriate to the project, including those of:

a. National Electric Code.

b. Florida Building Code. (Latest Revision)

B. CONTRACTOR shall comply with these codes, laws, regulations, rules, directives of all agencies, boards, districts, and governmental bodies having jurisdiction.

C. CONTRACTOR shall obtain and pay the cost of all building permits, fees, tie-in, or connection charges associated with the project.

D. The CONTRACTOR shall obtain construction permits from Broward County Planning and Environmental Regulation Division license(s), Florida Department of Environmental Protection, Fort Lauderdale Building Department and file a NOI with FDEP for NPDES compliance. Fort Lauderdale Building Permit will be available for pickup by CONTRACTOR once Notice to Proceed has been granted.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 MEASUREMENT AND PAYMENT

A. CONTRACTOR shall be reimbursed for permit fees as described in Section 01025.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01070 – ABBREVIATIONS OF INSTITUTIONS

PART 1 GENERAL

A.1 GENERAL

A. Wherever in these Specifications references are made to the standards, specifications, or other published data of the various international, national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these Specifications, the following acronyms or abbreviations, which may appear in these Specifications, shall have the meanings indicated herein.

A.2 ABBREVIATIONS

AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AHAM	Association of Home Appliance Manufacturers
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ASA	American Standards Association
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society

AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials & Code Administrators International
BCPERD	Broward County Planning and Environmental Regulation Division
BCHCED	Broward County Highway Construction and Engineering Division
BCHD	Broward County Health Department
BCTED	Broward County Traffic Engineering Division
BCWRMD	Broward County Water Resource Management Division
BCWWS	Broward County Water & Wastewater Services Division
BHMA	Builders Hardware Manufacturer's Association
CBM	Certified Ballast Manufacturers
CEMA	Conveyors Equipment Manufacturer's Association
CGA	Compressed Gas Association
CLFMI	Chain Link Fence Manufacturer's Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
EPA	Environmental Protection Agency
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FM	Factory Mutual System
FPL	Florida Power & Light
FS	Federal Specifications
HI	Hydraulics Institute
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IME	Institute of Makers of Explosives
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MPTA	Mechanical Power Transmission Association
MSS	Manufacturers Standardization Society
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association

NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NLGI	National Lubricating Grease Institute
NMA	National Microfilm Association
NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastics Pipe Institute
RCRA	Resource Conservation and Recovery Act
RIS	Redwood Inspection Service
RVIA	Recreational Vehicle Industry Association
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SB	Southern Bell
SFWMD	South Florida Water Management District
SMA	Screen Manufacturers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPI	Society of the Plastics Industry, Inc.
SPIB	Southern Pine Inspection Bureau
SPR	Simplified Practice Recommendation
SSA	Swedish Standards Association
SSBC	Southern Standard Building Code, Southern Building Code Congress
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
TAPPI	Technical Association of the Pulp and Paper Industry
TFI	The Fertilizer Institute
UL	Underwriters Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WEF	Water Environment Federation
WIC	Woodwork Institute of California
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01090 – REFERENCE STANDARDS

PART 1 GENERAL

1.1 GENERAL

A. Titles of Sections and Paragraphs

a. Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.

B. Applicable Publications

a. Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the WORK is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.

C. Specialists, Assignments

a. In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the WORK; also, they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Without limiting the generality of other requirements of the Specifications, all work specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.

B. References herein to "Building Code" shall mean "Florida Building Code". References to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code"

or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all addenda, modifications, amendments, or other lawful changes thereto.

C. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.

D. The CONTRACTOR shall construct the WORK specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed herein.

E. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

F. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

1.3 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format. The Specifications are organized into Divisions and Sections using the CSI/CSC's "Master Format" numbering system.

a. Section Identification

i. The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.

b. Division 01

i. Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content

a. The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

i. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

ii. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.4 REGULATIONS RELATED TO HAZARDOUS MATERIALS

A. The CONTRACTOR is responsible that all work included in the Contract Documents, regardless if shown or not, shall comply with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.

B. Where no specific regulations exist, all chemical, hazardous, and petroleum product piping and storage in underground locations must be installed with double containment piping and tanks, or in separate concrete trenches and vaults, or with an approved lining which cannot be penetrated by the chemicals, unless waived in writing by the OWNER.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01152 – APPLICATIONS FOR PAYMENT

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:

a. Division 01 Section "Alteration Project Procedures" for administrative procedures for handling changes to the Contract.

b. Division 01 Section "Measurement and Payment" for administrative requirements governing use of unit prices.

c. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

A. Schedule of Values. A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

a. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.

b. Round amounts to nearest whole dollar; total shall equal the Contract Sum.

c. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

d. Differentiate between items stored on-site and items stored off- site. For items stored off-site include evidence of insurance or bonded warehousing. Provide separate line items in the Schedule of Values for initial cost of

materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

e. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

f. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

g. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as General Condition's expense, at Contractor's option.

h. Schedule Updating. Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 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 an update construction schedule.

D. Each pay request must be accompanied by a partial release of lien by the General Contractor and by all Subcontractors, suppliers, and for all labor, as outlined below.

a. 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).

b. EXAMPLE:

i. In the first (1st) pay request, payment is requested by General Contractor for the asbestos contractor and the electrician. The General Contractor must attach his partial release of lien.

ii. For the second (2nd) pay request, the General Contractor must attach his partial release of lien from the asbestos contractor and 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.

E. Each payment application shall include partial as-builts or redlines showing the work that is being requested.

F. For each payment application requesting payment for undergrounding allowance for undergrounding work for overhead utilities, written authorization of payment from each utility being requested must be received with payment application.

G. 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.

H. 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

I. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by City.

J. Payment Application Forms: Use City Form “PERIODIC ESTIMATE FOR PARTIAL PAYMENT” as form for Applications for Payment.

a. 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.

b. Entries shall match data on the Schedule of Values and Contractor’s Construction Schedule. Use updated schedules if revisions were made.

c. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

K. 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.

a. Submit partial release of lien on each item for amount requested in previous application, after deduction for retainage, on each item.

b. When an application shows completion of an item, submit final release of lien.

c. City reserves the right to designate which entities involved in the Work must submit release of lien forms.

L. Initial Application for Payment. Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

a. List of subcontractors.

b. Schedule of Values.

c. Contractor's Construction Schedule (preliminary if not final).

d. Products list.

e. Submittals Schedule (preliminary if not final).

f. List of Contractor's staff assignments.

g. Copies of building permits.

h. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

i. Initial progress report.

j. Report of preconstruction conference.

M. 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:

a. Evidence of completion of Project closeout requirements.

b. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.

c. Updated final statement, accounting for final changes to the Contract Sum.

d. Final As-built drawings.

e. Evidence that claims have been settled.

f. Final liquidated damages settlement statement.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01200 – PROJECT MEETINGS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Contractor shall schedule and administer a preconstruction meeting, progress meetings at a minimum of every two weeks on a day established by the CITY's Representative and specially called meetings throughout progress of the work.

a. Prepare agenda for meetings.

b. Distribute written notice of each meeting five (5) days in advance of meeting date.

c. Make physical arrangements for meetings.

d. Preside at meetings.

e. Record the minutes; include significant proceedings and decisions.

f. Reproduce and distribute copies of minutes within three days after each meeting.

i. To participants in the meeting.

ii. To parties affected by decisions made at the meeting.

iii. Furnish three copies of minutes to CITY’s Representative.

B. Representative of CONTRACTOR, subcontractor and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

C. ENGINEER shall attend all meetings.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 PRE-CONSTRUCTION MEETING

A. Schedule after date of Notice to Proceed.

B. Location. A central site, convenient for all parties, designated by CITY's Representative.

C. Attendance:

a. The CONTRACTOR and its superintendent.

b. CITY'S ENGINEER and CITY'S ENGINEER'S professional consultants.

c. Resident Project Representative.

d. Representatives of the OWNER.

e. Major subcontractors.

f. Major Suppliers.

g. Governmental representatives as appropriate.

h. Others as requested by CONTRACTOR, CITY or CITY'S ENGINEER.

D. Suggested Agenda:

a. Distribution and discussion of:

i. List of major subcontractors and suppliers.

ii. Projected Construction Schedules.

iii. Shop drawings and other submittals.

iv. Traffic maintenance plan.

v. Community Public Relations.

b. Critical work sequencing.

c. Procurement of major equipment and materials requiring a long lead time.

d. Project Coordination

i. Designation of responsible personnel.

e. Procedures and processing of:

i. Field decisions.

ii. Proposal requests.

iii. Submittals.

iv. Change Orders.
v. Applications for Payment

f. Adequacy of distribution of Contract Documents.

g. Procedures for maintaining Record Documents.

h. Use of premises:

i. Office, work and storage areas.

ii. CITY's requirements.

i. Construction facilities, controls and construction aids.

j. Temporary utilities.

k. Safety procedures.

l. Security procedures.

m. Housekeeping procedures.

1.4 PROGRESS MEETINGS

A. Contractor shall schedule regular biweekly meetings on a day established by the CITY's Representative as required.

B. Hold called meetings as required by progress of the work.

C. Location of the meetings. Project field office of CITY's Representative.

D. Attendance:

a. CITY's Representative and CITY's professional consultants as needed.

b. ENGINEER.

c. Subcontractors as active on the site.

d. Suppliers as appropriate to the agenda.

e. Governmental representatives as appropriate.

f. Others, as requested by CONTRACTOR, CITY or CITY'S ENGINEER.

E. Suggested Agenda:

a. Review, approval of minutes of previous meeting.

b. Review of work progress since previous meeting.

c. Field observations, problems, and conflicts.

d. Problems, which impeded Construction Schedule.

e. Review of off-site fabrication, delivery schedules.

f. Corrective measures and procedures to regain projected schedule.

g. Revisions to Construction Schedule.

h. Progress, schedule, during succeeding work period.

i. Coordination of schedules.

j. Community Public Relations.

k. Review submittal schedules; expedite as required.

l. Maintenance of quality standards.

m. Pending changes and substitutions.

n. Review proposed changes for:

   i. Effect on Construction Schedule and on completion date.

   ii. Effect on other contracts of the Project.

o. Other business.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01210 – SCHEDULES AND REPORTS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The Work under this Contract shall be planned, scheduled, executed, reported, and accomplished using the Critical Path Method (hereinafter referred to as CPM), in calendar days, unless otherwise specifically provided in the Contract Documents.

B. The primary objectives of the CPM scheduling requirements are: (1) to insure adequate planning and execution of the Work by CONTRACTOR; (2) to assist OWNER and ENGINEER in evaluating progress of the Work; (3) to provide for optimum coordination by CONTRACTOR of their trades, Subcontractors and Suppliers; (4) to permit the timely prediction or detection of events or occurrences which may affect the timely prosecution of the Work; and (5) to provide a mechanism or tool for use by the OWNER, ENGINEER and CONTRACTOR in determining and monitoring any actions of the CONTRACTOR which may be required in order to comply with the requirements of the Contract Documents relating to the completion of the various portions of the Work by the Specific Dates specified in the Contract Documents.

C. CONTRACTOR is responsible for determining the sequence of activities, the time estimates of the detailed construction activities and the means, methods, techniques, and procedures to be employed. The construction Schedule shall represent the CONTRACTOR's best judgment of how they will prosecute the Work in compliance with the Contract requirements. CONTRACTOR shall ensure that the Construction Schedule is current and accurate and is properly and timely monitored, updated, and revised as Project conditions and the Contract Documents may require.

D. CONTRACTOR shall consult with their principal Subcontractors and Suppliers relating to the preparation of their construction plan and Construction Schedule. Principal Subcontractors shall receive copies of those portions of CONTRACTOR's Construction Schedule, which relate to their work and shall be continually advised of any updates or revisions to the Construction Schedule as the Work progresses. When CONTRACTOR submits their Construction Schedule to the OWNER or makes any proposed updates or revisions to such Schedule, CONTRACTOR shall consult with and obtain the concurrence of their principal Subcontractors and Suppliers. Tasks to be performed by Subcontractors must be clearly noted on the schedule. CONTRACTOR shall be solely responsible for ensuring that all Subcontractors and Suppliers comply with the requirements of the Construction Schedule for their portions of the Work.

E. CONTRACTOR will provide the basic data relating to activities, durations and sequences of construction and shall develop and deliver to the OWNER and ENGINEER the draft of the Construction Schedule. This data shall reflect the CONTRACTOR's actual construction plan for the Project, and shall fully comply with all requirements of the Contract Documents.

F. When there are separate subcontractors working concurrently on the Project whose work must interface or be coordinated with the work of separate subcontractors,

CONTRACTOR shall coordinate their activities with the activities of the separate contractors and shall, prior to the submission of their Construction Schedule to the OWNER and ENGINEER and obtain written approval of their Construction Schedule by the separate subcontractors. If CONTRACTOR is unable to obtain such written approval by the separate subcontractors after their best efforts to do so, or if a conflict occurs that cannot be resolved by mutual agreement between CONTRACTOR and any separate subcontractors, the OWNER shall make a determination of the schedule, which shall be binding upon CONTRACTOR and the separate subcontractors.

G. The CONTRACTOR shall be responsible for providing the services required for the basic drafting and computerization of CONTRACTOR's data for CONTRACTOR's initial Construction Schedule, in accordance with the requirements of this Contract. The CONTRACTOR shall use Primavera Suretrack, Project Manager 3 or approved equal computer program for development and maintenance of the schedule.

H. To carry out the intent of this Section, CONTRACTOR agrees that the orientation session, as described in Subparagraph 1.02-B, shall not be grounds for any claim by CONTRACTOR or any of their Subcontractors of alleged interference, lack of cooperation, delay disruption, negligence or hindrance by OWNER or ENGINEER, and CONTRACTOR covenants not to sue therefore.

I. It is understood and agreed that the Construction Schedule is to represent CONTRACTOR's best plan and estimate for the Work; however, CONTRACTOR acknowledges that the Construction Schedule may have to be revised from time-to-time as progress proceeds. CONTRACTOR further acknowledges and agrees that the Owner does not guarantee that: (1) CONTRACTOR can start work activities on the "early start" or "late start" dates or complete work activities on the "early finish" or "late finish" dates shown in the schedule, or as same may be updated or revised; (2) CONTRACTOR can proceed at all times in the sequence established by the utilization of only the resources and labor they initially plans for the performance of the work; (3) CONTRACTOR's Construction Schedule will not have to be modified in order to obtain the agreement of any separate Contractors to the schedule; or (4) CONTRACTOR's Construction Schedule will not have to be modified or changed by direction of the Owner. Any changes, modifications or adjustments made by CONTRACTOR to the Construction Schedule shall be in full compliance with all requirements of the Contract Documents.

J. The CONTRACTOR acknowledges and agrees that their Construction Schedule must be flexible in order to accommodate and allow for their coordination with the operations of the Owner and the work of separate contractors relating to the Project. The Owner and ENGINEER will review the CONTRACTOR's Construction Schedule for compatibility with Owner operations and the work of separate contractors. CONTRACTOR agrees to hold meetings with the Owner, ENGINEER and separate contractors to resolve any conflicts between CONTRACTOR's Construction Schedule and the operations of the Owner or work of separate contractors. CONTRACTOR agrees to fully cooperate with Owner and separate contractors to resolve such conflicts and to revise their Construction Schedule as reasonably required.

K. It is understood and agreed that should the OWNER and ENGINEER provide

CONTRACTOR, at CONTRACTOR's request, with any services, advice or counsel relating to the scheduling or coordination of the Work or any other matter that: (1) OWNER and ENGINEER shall not be liable to CONTRACTOR for any errors, omissions, negligence or deficiencies which may in any way occur because of same; (2) such services, advice or counsel are provided solely as aids in the development by CONTRACTOR of a representation of CONTRACTOR's actual construction plan and schedule in accordance with the requirements of the Contact Documents, and OWNER and ENGINEER shall not be liable to CONTRACTOR should CONTRACTOR rely on such services, advice or counsel to their detriment; (3) such services, advice or counsel shall not relieve CONTRACTOR of any responsibility under the Contract for all construction means, methods, techniques, coordinating all portions of the Work; and (4) any services provided by the OWNER and ENGINEER or the lack or alleged untimeliness thereof will not in any way take the place of or relieve the CONTRACTOR of full responsibility for compliance with all requirements of the Contract Documents, including, but not limited to the obligation to complete the Work within the Specific Dates set forth in Contract Documents.

L. Approval or acceptance by the OWNER of the CONTRACTOR's Construction Schedule, or any revisions or updates thereto, is advisory only and shall not relieve the CONTRACTOR of the responsibility for accomplishing each portion of the Work within each and every applicable Specific Date. Omissions and errors in the approved or accepted Construction Schedule, or any revisions or updates shall not excuse performance, which is not in compliance with the Contract. Approval by the OWNER in no way makes the OWNER an insurer of the reliability, accuracy, or feasibility of the Construction Schedule nor liable for time or cost overruns flowing from such omissions or errors. It is understood and agreed that CONTRACTOR cannot rely upon any informal or constructive acquiescence or approval of the Construction Schedule by OWNER has any right or power to agree to any schedule commitment or obligation on the part of OWNER except as set forth expressly in the Contract Documents.

M. Should CONTRACTOR intend or plan to complete the Work, or any portion thereof, earlier than any applicable Specific Date or the Contract Time, CONTRACTOR shall give timely and reasonable notice of this fact to OWNER. OWNER shall have the sole discretion to agree to or reject such early completion plan by CONTRACTOR. OWNER shall have no duty or obligation to agree to, or to cooperate with CONTRACTOR regarding any early completion plan or proposal by CONTRACTOR and shall not be liable for any damages of CONTRACTOR because of the rejection by OWNER of said plan.

N. Unless otherwise specifically provided in the Contract Documents, CONTRACTOR acknowledges that OWNER has contemplated in OWNER’s planning and approval of the schedule, and in OWNER’s budgeting for professional services, that the Work will be performed on a 5-day work week basis, utilizing a single 8-hour shift per day. OWNER shall have the sole discretion of approving or rejecting a variance in the workweek, number of shifts, or shift length. Unless otherwise agreed by OWNER, CONTRACTOR shall bear the cost of, and pay the OWNER, for additional staff and supervisory personnel, including but not limited to the services of ENGINEER necessary to support any variance in the contemplated work week, number of shifts or shift length.

1.02 POST AWARD ACTIVITIES

A. Upon receipt by CONTRACTOR of the Notice to Proceed, and until the Construction Schedule is approved by the OWNER, CONTRACTOR shall proceed with CONTRACTOR's Work in accordance with the Provisional Preliminary Network of CONTRACTOR which was included as part of the CONTRACTOR's bid.

B. Orientation Session: CONTRACTOR shall, upon notification from the OWNER, attend an orientation session relating to the Schedules and Reports requirements for this Project. This orientation meeting is designed to assist the CONTRACTOR in planning the Work and in developing the Construction Schedule. This session will normally be held within three (3) days after the date of the Notice to Proceed or the Notice of Award of Contract by OWNER (whichever occurs first) and will be conducted by the OWNER. CONTRACTOR shall arrange for CONTRACTOR's project manager, Superintendent, Engineer of Record, major Subcontractors and Suppliers, and any scheduling engineers that CONTRACTOR may employ to attend the orientation session.

C. Among other things, the OWNER and ENGINEER will review: the objectives of the Schedules and Reports requirements; the procedures and requirements for the preparation of the Construction Schedule and Schedule of Values by CONTRACTOR; how the requirements of the Contact Documents will be monitored and enforced by the OWNER; long-lead items and time requirements for work by Subcontractors will be identified. It is understood and agreed all requirements of the Contract Documents remain applicable to CONTRACTOR's work whether or not discussed at this session.

D. Should CONTRACTOR or CONTRACTOR's principal Subcontractors and Suppliers fail or refuse to attend this orientation session, OWNER shall have the right to terminate CONTRACTOR for default pursuant to the provisions of the General Contracts.

1.03 DRAFT OF CONSTRUCTION SCHEDULE

A. Within fifteen (15) days of the orientation session, (even though CONTRACTOR may not have completed subcontractor negotiations and executed subcontracts) the CONTRACTOR, in consultation with the OWNER and ENGINEER, shall complete a draft of CONTRACTOR's time-scaled network graphic and work schedule.

1. Except for procurement requirements, CONTRACTOR shall differentiate activities of the Schedule so that no single activity shown has a duration longer than fourteen (14) calendar days, unless the OWNER, in OWNER's sole discretion, shall approve a longer duration for certain activities.

2. The Construction Schedule shall represent the CONTRACTOR's best judgment and intended plan for completion of the Work in compliance with Specific Dates listed in the Contract Documents and the Contract Time. The Construction Schedule shall consider all foreseeable activities including interface dates with utility owners, the OWNER's operations, and others. The Construction Schedule shall anticipate all necessary labor and resources to accomplish the activities within the durations set forth in the Construction Schedule.

B. OWNER shall have seven (7) days to approve the draft schedule information and shall

have the right to require the CONTRACTOR to modify any CONTRACTOR data or any portion of the CONTRACTOR's Construction Schedule, Schedule of Values or Recovery Schedule, as herein required, with CONTRACTOR bearing the expense thereof, which the OWNER reasonably determines to be: (1) impracticable; (2) based upon erroneous calculations or estimates; (3) unreasonable; (4) necessary to avoid undue interference with the OWNER's operations or those of any utility owners or adjoining property owners; (5) necessary to ensure completion of the Work by the Specific Dates set forth in the Contract Documents; (6) required in order for CONTRACTOR to comply with the requirements of the Contract Documents or (7) not in accordance with the CONTRACTOR's actual operations.

C. The OWNER and ENGINEER will be available during normal working hours to consult with the CONTRACTOR should questions arise while the CONTRACTOR assembles the information required for the Construction Schedule. The OWNER will pay for the reasonable costs for the ENGINEER’s time for this consultation.

1.04 CONSTRUCTION SCHEDULE

A. Within ten (10) days after approval of the Construction Schedule draft by the OWNER, based on the data submitted by the CONTRACTOR, the CONTRACTOR will provide a final draft time-scaled graphic network of activities and computer listing of all activities included in the Construction Schedule. The graphic representation and computer printouts shall be carefully reviewed by the OWNER and ENGINEER and discussed at a meeting with the CONTRACTOR for the purpose of finalizing the schedule. Any additions and/or deletions to these documents that are desired by the OWNER will be brought to the attention of the CONTRACTOR within three (3) days. The CONTRACTOR shall, if consistent with the requirements of the Contract Documents, incorporate the OWNER’s revisions and shall deliver the completed Construction Schedule and computer reports to the OWNER and ENGINEER for review and acceptance within seven (7) days.

B. CONTRACTOR shall submit as a part of the data submitted to the OWNER and ENGINEER a narrative report indicating anticipated allocation by CONTRACTOR of the following resources and work shifts for each activity which they propose to be utilized on the Project:

1. Labor resources.

2. Equipment resources.

3. Whether CONTRACTOR proposes the Work to be performed on single, double, or triple shifts, and whether it is to be done on a 5-, 6- or 7-day workweek basis. If the CONTRACTOR chooses any work schedule other than the 8-hour day, 5-day workweek, and approved by the OWNER, any overtime costs shall be borne by the CONTRACTOR.

1.05 SCHEDULE OF VALUES

A. Within ten (10) days after completion of the Construction Schedule the CONTRACTOR shall submit to the OWNER and ENGINEER a Schedule of Values for review by the

OWNER and ENGINEER, allocating a dollar value for the activities on the Construction Schedule. The dollar value for the activity shall be the cost of the work of the activity including labor, materials, and pro rata contribution of General Conditions requirements, overhead and profit. The sum of all activity costs shall equal the total Contract Sum. The CONTRACTOR shall revise the Schedule of Values as necessary to gain the approval of the OWNER and ENGINEER.

B. The activity cost for the Schedule of Values shall be coded with a cost code corresponding to the trade, Subcontractor or Supplier performing the work so that subtotals for each division of the Work can be prepared.

C. The Schedule of Values shall, in the best judgment of the CONTRACTOR, represent a fair, reasonable, and equitable dollar (cost) allocation for each activity on the Construction Schedule.

D. The CONTRACTOR will provide, within seven (7) days after approval of the Schedule of Values, a computer listing of all cost-loaded activities for ENGINEER and OWNER's review.

1.06 CONSTRUCTION SCHEDULE CONTENT

A. The Construction Schedule shall consist of a time-scaled, detailed network graphic representation of all activities that are part of the CONTRACTOR's construction plan and an accompanying computerized mathematical analysis of these activities. The graphic network shall include, but not be limited to, the following information:

1. Project Name

2. Activities of completed work ready for use by next trade, owner, etc.

3. Activities relating to different areas of responsibility, such as subcontracted work, which is distinctly separate from that being done by the CONTRACTOR directly.

4. Different categories of work as distinguished by craft or crew requirements.

5. Different categories of work as distinguished by equipment requirements.

6. Different categories of work as distinguished by materials.

7. Distinct and identifiable subdivisions of work such as structural slabs, beams, columns.

8. Locations of work within the Project that necessitates different times or crews to perform.

9. Outage schedules for existing utility services that will be interrupted during the performance of the Work.

10. Acquisition and installation of equipment and materials, supplies and/or installed by the OWNER or separate CONTRACTORS.

11. Material to be sorted on site; and

12. Specific Dates.

B. For all major equipment and materials to be fabricated or supplied for the Project, the Construction Schedule shall show a sequence of activities including:

1. Preparation of Shop Drawings and sample submissions.

2. A reasonable time for review of Shop Drawings and samples or such time as specified in the Contract Documents:

3. Shop fabrication, delivery, and storage.

4. Erection or installation; and

5. Testing of equipment and materials.

C. The Construction Schedule shall include late completion dates for the Work that is no later than the required Specific Dates. The time-scaled graphic network shall be drawn based upon the early start dates of activities shown on the graphic.

D. All activity durations shall be given in calendar days.

1.07 CONTRACTOR APPROVAL AND CERTIFICATION

A. Approval by CONTRACTOR of the drafting and computerization of the Construction Schedule and the Schedule of Values shall be signified by the CONTRACTOR by signing the following certification:

"The undersigned CONTRACTOR certifies that the Construction Schedule which is comprised of the graphic network of activities displayed on the sheets dated and of the computerized mathematical reports dated is the CONTRACTOR's Construction Schedule as required by the Contract Document; and that said Schedule is a true and accurate representation of CONTRACTOR's plan of construction for the Work and fully complies with the requirements of the Contract Documents. The CONTRACTOR further certifies that CONTRACTOR will prosecute the work in accordance with this schedule, subject to any change therein which is implemented in accordance with the Contract Documents; and the undersigned acknowledges that this Schedule shall be the instrument by which progress of the work shall be monitored, and together with the dollar value assigned to each activity, shall be the basis of monthly payments in accordance with the Contract Documents; and CONTRACTOR certifies they have fully complied with all of the requirements of the Contract Documents."

1.08 UPDATING OF CONSTRUCTION SCHEDULE/PROGRESS REPORTS

On or about the dates specified, CONTRACTOR shall arrange for CONTRACTOR's project manager and superintendent to meet at Project Site with the OWNER and ENGINEER to review CONTRACTOR's report of actual progress prepared by CONTRACTOR. Said report shall set forth up-to-date and accurate progress data, shall be based upon CONTRACTOR's best judgment and shall be prepared by CONTRACTOR in consultation with all principal Subcontractors and suppliers.

B. The progress report of CONTRACTOR shall show the activities or portions of activities, completed during the reporting period, the actual start and finish dates for these activities, remaining durations and/or estimated completion dates for activities currently in progress.

C. The CONTRACTOR will produce a computerized update work sheet for approval by the OWNER as a part of this process.

D. CONTRACTOR shall submit a narrative report with the updated progress analysis which shall include, but not be limited to a description of problem areas, current and anticipated delaying factors and their impact, explanations of corrective actions taken or planned, any newly planned activities or changes in sequence, and proposed logic for a Recovery Schedule, if required, as further described herein. The report shall also include:

A. A narrative describing actual work accomplished during the reporting period.

B. A list of major construction equipment used on the Work during the reporting period and any construction equipment idle during the reporting period.

C. The total number of personnel by craft actually engaged in the Work during the reporting period, with such total stated separately as to office, supervisory, and field personnel.

D. A labor and equipment forecast for the succeeding thirty (30) days, stating the total number of personnel by craft, and separately stating such total as to office, supervisory and field personnel.

E. A list of CONTRACTOR supplied materials and equipment, indicating current availability and anticipated job site delivery dates.

F. Changes or additions to CONTRACTOR's supervisory personnel since the preceding progress report.

E. The CONTRACTOR will provide initial computer reports and monthly reports thereafter, in accordance with the following:

1. Schedule Reports: Initial and subsequent Schedule Reports will contain the following minimum information for each activity:
   a. Activity number, description, and estimated duration in days.
   b. Early and late finish dates.
   c. Percentage of each activity completed as of each report.
   d. Remaining float/days behind schedule.
   e. Responsibility for activity. Actual start and finish dates shall be indicated for

each activity, as appropriate. Dummies and completed activities will be omitted from remaining Float and Late Start Sorts.

2. Cost Reports: Initial and subsequent Cost Reports will include the following information for each activity, sorted by trade activity:

   a. Activity number and description.
   b. Percentage of value of Work in place against total value.
   c. Total cost of each activity.
   d. Value of Work in place since last report.
   e. Value of Work in place to date.
   f. Value of uncompleted Work.

3. As part of the updating process, the CONTRACTOR'S computer will calculate, based upon progress data provided by CONTRACTOR, and agreed to by the OWNER, the value of work done for each activity based on percentage complete for each activity less the amount previously paid for past percentages completed. Summation of all values of each activity less the appropriate percent of retainage shall be the amount payable to the CONTRACTOR, provided that CONTRACTOR has complied with all requirements of the Contract Documents.

F. CONTRACTOR shall be solely responsible for expediting the delivery of all materials and equipment to be furnished by CONTRACTOR so that the progress of construction shall be maintained according to the currently approved Construction Schedule for the Work. CONTRACTOR shall notify the OWNER and ENGINEER in writing, and in a timely and reasonable manner, whenever CONTRACTOR determines or anticipates that the delivery date of any material or equipment to be furnished by CONTRACTOR will be later than the delivery date indicated by the Construction Schedule or required consistent with the completion requirements of this Contract, subject to schedule updates as herein provided.

G. CONTRACTOR shall ensure that the critical path runs through on-site activities and that off-site activities do not control the critical path of the Construction Schedule.

1.09 INITIAL PROGRESS PAYMENT

A. The completed Construction Schedule, including the Schedule of Values, will be required for each Application for Payment. However, one initial provisional progress payment may be payable in the sole discretion of OWNER if OWNER determines the CONTRACTOR is complying with these Schedules and Reports provisions during the development of the Construction Schedule and Schedule of Values as required herein and represented to be true by the ENGINEER. However, no more than one Application for Payment will be approved until all of the requirements of these Schedules and Reports provisions have been met.

1.10 RECOVERY SCHEDULE

Should the updated Construction Schedule show at any time during CONTRACTOR's performance, in the sole opinion of the OWNER, that the CONTRACTOR is fourteen (14) or more days behind schedule for any Specific Date, or should CONTRACTOR be required to undertake actions under Paragraph 40 of the General Conditions hereof, the CONTRACTOR shall prepare a Recovery Schedule at no additional cost to the OWNER

(unless the OWNER is solely responsible for the event or occurrence which has caused the schedule slippage) explaining and displaying how CONTRACTOR intends to reschedule the Work in order to regain compliance with the Construction Schedule during the immediate subsequent pay period.

A. If the CONTRACTOR believes that all of the time can be recovered during the subsequent pay period the CONTRACTOR will be permitted to prepare a Recovery Schedule as set forth below. However, if the CONTRACTOR believes it will take more than thirty (30) days to recover all of the lost time, CONTRACTOR shall prepare and submit a request for revision to the Construction Schedule and comply with all of the requirements for a Schedule Revision.

1. The CONTRACTOR shall prepare and submit to the OWNER and ENGINEER a one-month maximum duration Recovery Schedule, incorporating best available information from Subcontractors and others, which will permit return to Construction Schedule at the earliest possible time. The CONTRACTOR shall prepare a Recovery Schedule to same level of detail as the Construction Schedule for a maximum duration of one month. This Recovery Schedule shall be prepared in coordination with other separate CONTRACTORs on the Project.

2. Within two (2) days after submission of Recovery Schedule to the OWNER and ENGINEER, CONTRACTOR shall participate in a conference with the OWNER AND ENGINEER to review and evaluate the Recovery Schedule. Within two (2) days of conference, the CONTRACTOR shall submit the revisions necessitated by the review for the OWNER AND ENGINEER's review and approval. The CONTRACTOR shall use the approved Recovery Schedule as their plan for returning to the Construction Schedule.

3. CONTRACTOR shall confer continuously with the OWNER and ENGINEER to assess the effectiveness of the Recovery Schedule. As a result of this conference, the OWNER will direct the CONTRACTOR as follows:

a. If the OWNER determines the CONTRACTOR is still behind the schedule the OWNER will direct the CONTRACTOR to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the OWNER as provided elsewhere in the Contract Documents.

b. If the OWNER determines the CONTRACTOR has successfully complied with provisions of the Recovery Schedule, the OWNER will direct the CONTRACTOR to return to the use of the approved Construction Schedule.

1.11 SCHEDULE REVISIONS

A. Should CONTRACTOR desire to or otherwise be required under the Contract Documents to make modifications or changes in CONTRACTOR's method of operation, the sequence of Work or the durations of the activities in the Construction Schedule,

CONTRACTOR shall do so in accordance with the requirements of the Contract Documents. The OWNER must approve revisions to the approved Construction Schedule in writing.

B. CONTRACTOR shall submit requests for revisions to the Construction Schedule to the OWNER and ENGINEER, together with written rationale for revisions and description of logic for rescheduling work and maintaining the Specific Dates listed in the Contract Documents. Proposed revisions acceptable to the OWNER will be incorporated into next update of Construction Schedule. CONTRACTOR shall pay the OWNER for costs incurred by the OWNER for the revisions.

C. In submitting any proposed schedule revisions to the OWNER and ENGINEER, CONTRACTOR shall submit therewith the following certification:

"The undersigned CONTRACTOR certifies that the proposed schedule revision to the Construction Schedule which comprised of the graphic network of activities displayed on the sheets dated and of the computerized mathematical reports dated is CONTRACTOR's schedule revision to the Construction Schedule as required by the Contract Documents; and that said schedule revision is a true and accurate representation of CONTRACTOR's plan to complete the Work, including all Change Orders that are in the CONTRACTOR's possession as of the foregoing date, and fully complies with the requirements of the Contract Documents. The CONTRACTOR further certifies that CONTRACTOR will prosecute the Work in accordance with this schedule revision, subject to any change therein which is implemented in accordance with the Contract Documents."

1.12 FLOAT TIME

A. Float or slack time associated with one chain of activities is defined as amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as calculated as part of the Construction Schedule. Float or slack time shown on the Construction Schedule is not for exclusive use or benefit of either the OWNER, ENGINEER or the CONTRACTOR and is available for use by either of them according to whichever first needs the use or benefit of the float to facilitate the effective use of available resources and to minimize the impact of project problems, delays or Changes in the Work which may arise during performance. CONTRACTOR specifically agrees that the OWNER or ENGINEER may use float time in conjunction with their review activities or to resolve for any modification of the Specific Dates or an extension of the Contract Time or a claim for additional compensation as a result of any Project problem.

B. Float time shown on the Construction Schedule shall not be used arbitrarily by CONTRACTOR in a manner, which, in the opinion of the OWNER and ENGINEER, unnecessarily delays separate CONTRACTORs from proceeding with their work in a way which is detrimental to the interests of the OWNER. If CONTRACTOR refuses to perform Work which is available and necessary to be performed in order to not delay the Project, the OWNER may, regardless of the float shown on the Construction Schedule to be available for the path of activities which encompasses said Work, terminate the CONTRACTOR for default pursuant to the General Conditions of this Contract.

1.13 CONTRACTOR'S ORGANIZATION

A. CONTRACTOR shall maintain as part of their organization, or hire a subcontractor with, a competent staff of sufficient size who are knowledgeable in the use, application and implementation of CPM as required by the Contract Documents. It shall be the responsibility of this staff to prepare input information for the Construction Schedule, monitor progress, provide input for updating and revising logic diagrams when necessary and otherwise assist the CONTRACTOR in fulfilling their obligations hereunder.

1.14 DEFAULT

A. Failure of the CONTRACTOR to substantially comply with the requirements of this Section shall constitute a default by CONTRACTOR of CONTRACTOR's obligations under this Contract sufficient for termination of CONTRACTOR under the General Conditions of this Contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.01 MEASUREMENT AND PAYMENT

A. No separate measurement and payment is provided for work covered by this Section. All work required in connection with Schedules and Reports shall be included in the bid price for all other work.

END OF SECTION

SECTION 01220 – CONSTRUCTION SEQUENCING

PART 1 - GENERAL

1.01 PUBLIC NUISANCE

A. The Contractor shall not create a public nuisance including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, excessive back-up or blockage of sewer, excessive noise, or undue traffic disruption.

B. All roadway open-cuts shall be backfilled and compacted the same working day as trenching operations are undertaken. Pavement restoration of roadway open-cuts are to be in accordance with local authorities or no later than seventy two (72) hours after utility installation is completed.

C. No extra charge may be made for time lost due to work stoppage resulting from the creation or avoidance of a public nuisance.

1.02 JURISDICTIONAL DISPUTES

A. It shall be the responsibility of the Contractor to pay all costs that may be required to perform any of the work shown on the Drawings or specified herein in order to avoid any work stoppages due to jurisdictional disputes. The basis for subletting work in question, if any, shall conform with precedent agreements and decisions on record with the Building and Construction Trades Department, AFL-CIO, latest edition.

1.03 SEQUENCE OF WORK

A. The Contractor shall establish his work sequencing based on the use of crews to facilitate completion of construction and testing within the specified contract time. The Contractor shall submit detailed sequence of proposed construction along with the project schedule.

B. Prior to commencement of work on-site, Contractor shall furnish sequence of work and proposed access methods to the City for review and approval.

1.04 CONTRACTOR'S USE OF PREMISES

A. The Contractor shall assume full responsibility for the protection and safekeeping of all equipment, products, and materials. Storage and work areas are the responsibility of the Contractor and they shall be obtained by the Contractor at no cost to the Owner.

1.05 ACCESS

A. Contractor must maintain vehicular and pedestrian access throughout duration of project.

B. Contractor shall at all times maintain access ways for City vehicles and personal to maintain the pump stations or wastewater system as needed.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01230 – TESTING AND INSPECTION

PART 1 – GENERAL

A. All testing and inspection will be in accordance with the General Conditions.

B. The work or actions of the testing laboratory shall in no way relieve the Contractor of his obligations under the Contract. The laboratory testing work will include such inspections and testing required by the Contract Document, existing laws, codes, ordinances, etc. The testing laboratory will have no authority to change the requirements of the Contract Documents, nor perform or approve any of the Contractor's work.

C. The Contractor shall allow the Engineer ample time and opportunity for testing materials and equipment to be used in the work. He shall advise the Engineer promptly upon placing orders for materials and equipment so that arrangements may be made, if desired, for inspection before shipment from the place of manufacture. The Contractor shall at all times furnish the Engineer and his representatives, facilities including labor, and allow proper time for inspecting and testing materials, equipment, and workmanship. The Contractor must anticipate that possible delays may cause him in the execution of his work due to the necessity of materials and equipment being inspected and accepted for use. The Contractor shall furnish, at his own expense, all samples of materials required by the Engineer for testing, and shall make his own arrangement for providing water, electric power, or fuel for the various inspections and tests of structures and equipment. As a minimum, 48-hours advance written notice shall be provided by the Contractor for rebar, structural, pressure testing, and similar inspections by the Engineer. The amount of time required for advance written notice by the Contractor to the Engineer for other inspections depends upon other factors and shall be solely at the Engineer’s discretion.

D. The Contractor shall furnish the services of representatives of the manufacturers of certain equipment, as prescribed in other sections of the Specifications. The Contractor shall also place his orders for such equipment on the basis that, after the equipment has been tested prior to final acceptance of the work, the manufacturer will furnish to the City the certified statements that the equipment has been installed properly and is ready to be placed in functional operation. Tests and analyses required of equipment shall be paid for by the Contractor, unless specified otherwise in the section which covers a particular piece of equipment.

E. The Contractor will bear the cost of all additional tests, inspections, or investigations undertaken by the order of the Engineer for the purpose of determining conformance with the Contract Documents if such test, inspection, or investigations are not specifically required by the Contract Documents, and if conformance is ascertained thereby. Whenever nonconformance is determined by the Engineer as a result of such test, inspections, or investigations, the Contractor shall bear the full cost thereof or shall reimburse the City for said cost. The cost of any additional tests and investigations, which are ordered by the Engineer to ascertain subsequent conformance with the Contract Documents, shall be borne by the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01311 – 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:

a. Preliminary Construction Schedule.

b. Contractor's Construction Schedule.

c. Submittals Schedule.

d. Daily construction reports.

e. Material location reports.

f. Field condition reports.

g. Special reports.

B. Related Sections include the following:

a. Section 01152 – Applications for Payment

b. Section 01050 – Project Management

c. Section 01340 – Submittal Procedures

d. Section 01380 – Construction Photographs

e. Section 01400 – Quality Control

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.

a. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.

b. Predecessor Activity. An activity that precedes another activity in the network.

c. Successor Activity. An activity that follows another activity in the network.

B. CPM. Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

C. Critical Path. The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

D. Event. The starting or ending point of an activity.

E. Float. The measure of leeway in starting and completing an activity.

a. 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.

b. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.

c. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

F. Fragnet. A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

G. Milestone. A key or critical point in time for reference or measurement.

H. Network Diagram. A graphic diagram of a network schedule, showing activities and activity relationships.

I. Resource Loading. The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

A. Submittals Schedule. Submit three copies of schedule. Arrange the following information in a tabular format:

a. Scheduled date for first submittal.

b. Specification Section number and title.

c. Submittal category (action or informational).

d. Name of subcontractor.

e. Description of the Work covered.

f. Scheduled date for Engineer's final release or approval.

B. Preliminary Construction Schedule. Submit three opaque copies.

a. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.

C. Preliminary Network Diagram. Submit three opaque copies, large enough to show entire network for entire construction period. Show logic ties for activities.

D. Contractor's Construction Schedule. Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

E. CPM Reports. Concurrent with CPM schedule, submit three copies of each of the following computer-generated reports. Format for each activity in reports s h a l l contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.

a. Activity Report. List of all activities sorted by activity number and then early start date, or actual start date if known.

b. Logic Report. List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.

c. Total Float Report. List of all activities sorted in ascending order of total float.

F. Daily Construction Reports. Submit two copies at monthly intervals.

G. Material Location Reports. Submit two copies at monthly intervals.

H. Field Condition Reports. Submit two copies at time of discovery of differing conditions.

I. Special Reports. Submit two copies at time of unusual event.

1.5 COORDINATION

A. 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.

a. Secure time commitments for performing critical elements of the Work from parties involved.

b. 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.

a. Coordinate Submittals Schedule with list of subcontracts, the Schedule o f Values, and Contractor's Construction Schedule.

b. Initial Submittal. Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 20 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.

i. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.

c. Final Submittal. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Procedures. Comply with procedures contained in AGC's "Construction Planning & Scheduling."

B. Time Frame. Extend schedule from date established for the Notice to Proceed to date of Final Completion.

C. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

a. Activities. Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following: The schedule shall clearly indicate the critical path and all activities associated with it. The dependencies shall be clearly delineated.

b. All activities with a time duration exceeding five (5) days shall be shown as separate items.

c. Include procurement process activities for the following long lead items and major items as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.

d. Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.

e. Where materials require more than one (1) week fabrication or order time, this order/fabrication time shall be shown.

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.

a. City-Furnished Products. Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.

b. Work Restrictions. Show the effect of the following items on the schedule:

i. Use of premises restrictions.

ii. Environmental control.

c. Work Stages. Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:

i. Subcontract awards.

ii. Submittals.

iii. Purchases.

iv. Fabrication.

v. Sample testing.

vi. Deliveries.

vii. Installation.

viii. Tests and inspections.

ix. Adjusting.

x. Curing.

E. Milestones. Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, Final Completion, and Certificate of Occupancy.

F. Contract Modifications. For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

G. Computer Software. Prepare schedules using a program that has been developed specifically to manage construction schedules.

a. Microsoft Project 2000 or Oracle Primavera.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule. Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 10 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.

2.4 REPORTS

A. Daily Construction Reports. Prepare a daily construction report recording the following information concerning events at Project site:

a. List of subcontractors at Project site.

b. List of separate contractors at Project site.

c. Approximate count of personnel at Project site.

d. Equipment at Project site.

e. Material deliveries.

f. High and low temperatures and general weather conditions.

g. Accidents.

h. Meetings and significant decisions.

i. Unusual events (refer to special reports).

j. Stoppages, delays, shortages, and losses.

k. Emergency procedures.

l. Orders and requests of authorities having jurisdiction.

m. Change Orders received and implemented.

n. Construction Change Directives received and implemented.

o. Services connected and disconnected.

p. Equipment or system tests and startups.

q. Partial Completions and occupancies.

r. Substantial Completions authorized.

B. Material Location Reports. At weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.

C. Field 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.

2.5 SPECIAL REPORTS

A. General. Submit special reports directly to City within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events. When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise City in advance when these events are known orpredictable.

PART 3 EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. 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.

a. 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.

b. 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.

c. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution. Distribute copies of approved schedule to Engineer, C it y Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

a. Post copies in Project meeting rooms and temporary field offices.

b. 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

SECTION 01312 - FIELD ENGINEERING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR shall provide and pay for field Engineering and Survey services required for the project.

B. CITY PROJECT MANAGER will identify existing control points and property line corner stakes indicated on the DRAWINGS, as required.

1.2 QUALIFICATIONS OF SURVEYOR

A. Qualified Registered Professional Surveyor & Mapper, acceptable to CITY PROJECT MANAGER.

1.3 SURVEY REFERENCE POINTS

A. CITY PROJECT MANAGER will provide basic horizontal and vertical control points for the construction project including:

a. Permanent coordinate reference points with horizontal and vertical control, located and staked as shown on the plans.

B. The CONTRACTOR shall locate and protect control points prior to starting site construction WORK, and preserve all permanent reference points during construction.

a. Make no changes or relocations without prior written notice to CITY PROJECT MANAGER.

b. Report to CITY PROJECT MANAGER when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.

c. CONTRACTOR's surveyor shall replace project control points which may be lost or destroyed.

i. Establish replacements based on original survey control.

1.4 PROJECT SURVEY REQUIREMENTS

A. CONTRACTOR's surveyor shall establish a minimum of two permanent benchmarks on site, referenced to data established by survey control points.

B. CONTRACTOR shall establish lines and levels, locate and lay out, prepare a HORIZONTAL AND VERTICAL CONTROL PLAN for the purpose of construction staking by instrumentation and similar appropriate means:

a. Stakes for grading and fill placement.

b. Controlling lines and levels as required.

C. From time to time, verify layouts by same methods.

D. Horizontal and vertical control plan shall be made available to CITY PROJECT MANAGER in ACAD 2017 format or most current release.

E. Any plan released to the CONTRACTOR via electronic media is for as-built use only. They have not been geometrically calculated by a Surveyor. This applies to all aspects of the plans including, but not limited to, right-of-way, road utilities and drainage.

1.5 RECORDS

A. Maintain a complete, accurate log of all control and survey WORK as it progresses.

B. On completion of construction WORK, prepare a certified survey showing all dimensions, locations and elevations of project.

1.6 SUBMITTALS

A. Submit name and address of Professional Surveyor & Mapper and Professional Engineer to CITY PROJECT MANAGER.

B. On request of CITY PROJECT MANAGER, submit documentation to verify accuracy of field Engineering WORK.

C. Submit certificate signed by Registered Engineer or Professional Surveyor & Mapper certifying that elevation and locations of WORK are in conformance, or non-conformance, with Contract Documents.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01320 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Maintain at the site of the OWNER a record copy of:

a. DRAWINGS.

b. Specifications.

c. Addenda.

d. Change Orders and other modifications to the Contract.

e. Approved Shop DRAWINGS, Product Data and Samples.

f. Field Test Records.

g. Stormwater Pollution Prevention Plan (SWPPP)

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in CONTRACTOR's field office apart from documents used for construction:

a. Provide files and racks for storage of documents.

b. Provide locked cabinet or secure storage space for storage of samples.

B. File documents and samples in accordance with CSI format.

C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

D. Make documents and samples available at all times for inspection by OWNER and CITY PROJECT MANAGER.

1.3 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color cod designated by CITY PROJECT MANAGER.

1.4 RECORDING

A. Label each document, "PROJECT RECORD" in neat large printed letters, or by rubber stamp.

B. Record information concurrently with construction progress. Do not conceal any WORK until required information is recorded.

C. DRAWINGS: Legibly mark to record actual construction: (hard copy and ACAD format)

a. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

b. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.

c. Field changes of dimension and detail.

d. Changes made by Field Order or by Change Order.

e. Details not on original Contract DRAWINGS.

D. Specifications and Addenda; Legibly mark each Section to record:

a. Manufacturer, trade name, catalog number, and supplier of each produce and item of equipment actually installed.

b. Changes made by Field Order or by Change Order.

1.5 AS-BUILT AND RECORD DRAWINGS

A. The term ‘AS-BUILT DRAWING’ refers to drawings signed and sealed by a Florida registered surveyor and mapper (PSM) provided by the CONTRACTOR. As-built information will be provided to the Engineer of Record who will prepare or have prepared record drawings based on as-built information provided by the PSM and from information provided by the engineer’s staff.

B. The as-built drawings cover sheet will be signed, sealed and dated by the PSM. The cover sheet will include the PSM’s name, business name, PSM number, address and telephone number and contain the following statement:

“I hereby certify that the as-built location information of the potable water, reclaimed water, wastewater and drainage facilities shown on these drawings conforms to the minimum technical standards for land surveying in the State of Florida, Chapter 5J-17.050(10)(i) (Florida Administrative Code), as adopted by the Department of Agriculture and Consumer Services, Board of Professional Surveyors and Mappers, and that said as-builts are true and correct to the best of our knowledge and belief.”

C. As-builts will contain the information on the design drawings, plus the following additional requirements:

a. As-builts are to document changes between the design and construction. All information that is incorrect due to changes during construction will be corrected. Incorrect or no longer relevant information will be erased or struck through. Any facilities constructed in a horizontal or vertical location materially different (one-tenth foot horizontal, one-tenth foot vertical) than the design location will have their design location struck through and will be redrafted at the constructed location. Design drawing dimensioning to water and wastewater facilities will be corrected as necessary.

b. Drawings will be a complete set including cover sheet, index (if one was included in the approved design drawings) and any other sheets included in the approved design set. Standard detail sheets are not necessary.

c. Drawings will include the MINIMUM AS-BUILT AND RECORD DRAWING CONTENTS described in the City of Fort Lauderdale minimum standards.

D. The CONTRACTOR shall maintain full size (24"x36") field drawings to reflect the "as-built" items of WORK as the WORK progresses. Upon completion of the WORK, the CONTRACTOR shall prepare a record set of "AS-BUILT" DRAWINGS on full-size, reproducible material and an electronic file in .DWG format (AutoCAD, latest Version). One set of full-size design DRAWINGS on reproducible material will be furnished to the CONTRACTOR by the design ENGINEER at the current square foot price. An electronic file of the design DRAWINGS on a compact disk will be furnished to the CONTRACTOR by the design ENGINEER at no additional cost (for as-built purposes only). No additional payment will be made for those "as-built" DRAWINGS.

E. The cost of maintaining record changes, and preparation of the AS-BUILT DRAWINGS shall be included in the unit prices bid for the affected items. Upon completion of the WORK, the CONTRACTOR shall furnish the CITY PROJECT MANAGER the reproducible AS-BUILT DRAWINGS and electronic files. The completed AS-BUILT DRAWINGS shall be delivered to the CITY PROJECT MANAGER at least 48 hours prior to final inspection of the WORK. The Final Inspection will not be conducted unless the AS-BUILT DRAWINGS are in the possession of the CITY PROJECT MANAGER.

F. The completed AS-BUILT DRAWINGS shall be certified by a Professional Surveyor and Mapper registered in the State of Florida. This certification shall consist of the surveyor's embossed seal bearing the registration number, the surveyor's signature and date on each sheet of the drawing set. In addition, the key sheet, cover sheet or first sheet of the plans set shall list the business address and telephone number of the surveyor. The final as-builts shall also be submitted using state plane coordinates. (NAVD 1988 for vertical; NAD '83 with '90 adjustment for horizontal).

F. Representative items of WORK that should be shown on the record DRAWINGS as verified, changed, or added are shown below:

a. Plans:

i. Structure types, location with grade of rim and flow-line elevations.

ii. Utility type, length, size and elevation in conflict structures.

iii. All maintenance access structures, valves and hydrants within right-of-way.

iv. Spot (critical) elevations at plateaued intersections. (P.C., P.T., and midpoint of all intersections, etc.)

b. Pavement Marking and Signing Plans: Sign location where installed if different from plans.

c. Paving Grading and Drainage Plans: Location (horizontal and vertical) of all pipe lines, structures, finished surface elevations in all areas directly impacted by the project, limits of new pavement, etc.

H. The CONTRACTOR shall submit three sets of progress AS-BUILT DRAWINGS with each application for payment. These DRAWINGS shall accurately depict the WORK completed and for which payment is being requested.

I. The term 'RECORD DRAWING' refers to the final drawing set signed and sealed by the Engineer of Record. The Engineer of Record will prepare or have prepared record drawings based on as-built information provided by a PSM and from information provided by the engineer's staff. The Engineer of Record shall retain the signed and sealed 'as-built' drawings provided by the PSM with the other project records for possible review by CITY upon request. RECORD DRAWING shall meet the requirements of the Contract Documents.

J. AS-BUILT and RECORD DRAWINGS shall include the following contents at a minimum.

a. The amount of information required on as-built and record drawings will require the drawing author to organize its presentation in order to make the drawings readable. On occasion, it may be necessary use a table to show coordinate information.

b. Show the limits of new pavement in addition to resurfaced pavement.

c. Length of slotted exfiltration trench pipe and solid RCP drainage pipe.

d. Show elevations to the nearest one hundredth of a foot for:

i. Drainage structure grates.

ii. Inverts of every storm drainage pipe, including connections to

existing pipes.

iii. Utility crossings including the bottom of pipe elevation, material, and diameter of the higher utility and the top of pipe elevation, material, and diameter of the lower utility.

iv. Finished asphalt pavement, concrete, and sod surfaces on at least a 50-ft grid minimum in addition to at grade changes, the top and bottom corners of ramps, along ADA accessible paths, along the lowest point in a swale, and at any other points within the project area as request by the ENGINEER or CITY.

e. Coordinates will be provided for CITY maintained facilities, including:

i. Center of installed drainage structures.

ii. Installed signage.

iii. Other locations designated by CITY.

f. Show the changed location of any non-water/wastewater features so they are at the visually correct location relative to CITY maintained facilities.

g. Drawings shall include color photographs of all connections to existing CITY infrastructure as well as all critical utility crossings and where specifically required on the design drawings. The pictures will be taken with a GPS camera that automatically geotags the picture. A maximum of six photographs per sheet is acceptable. Each photograph shall have a minimum size of 8”x10”. Photographs shall have a density of 3.0 megapixel or greater. Plot resolution is to be minimum 300 dots per inch. Photographs shall normally be taken from a point between four feet (4’) and six feet (6’) above the subject infrastructure and shall show good detail in both shadow and sunlit areas. Include a measuring device in the photo for scale and where applicable to indicate the depth or separation of the utilities. A symbol (i.e. an arrow) is to be used in the plan views indicating the location and direction of view for each photograph submitted. The symbol must include the photograph number. A caption under each photograph shall include the following information:

i. Photograph number

ii. Photograph description

iii. Date of photograph

iv. Location and direction of view (for example 201 NW 34 Street looking North) State plane coordinates

v. All photographs included in the drawings will also be provided to

CITY in JPEG format on a Flash Drive or External Drive format media. The Flash Drive or External Drive will be labeled with the CITY project name and number. Individual photo files will be named using the same photograph number contained in the drawings.

h. The size and material of the piping shall be verified by the survey crew at the time of as-built.

i. As-builts of all drainage lines shall include the following information:

   i. Rims, inverts, length of piping between structures, length of exfiltration trench, and weir elevations if applicable.

   ii. The size and material of the piping shall be verified by the survey crew at the time of as-built.

j. As-builts for the edge of pavement and sidewalk locations shall include horizontal locations and shall indicate all deviations from the design plans.

k. All rock as-builts for parking lot, roadways and swales areas shall consist of the following:

   i. Rock elevations at all high and low points, and at enough intermediate points to confirm slope consistency and every 50' for roadways.

   ii. Rock as-builts shall be taken at all locations where there is a finish grade elevation shown on the design plans.

   iii. All catch basin and maintenance access structure rim elevations shall be shown.

   iv. Elevations around island areas will also be required.

   v. As-builts shall be taken on all paved and unpaved swales prior to placement of asphalt and/or topsoil/sod, at enough intermediate points to confirm slope consistency and conformance to the plan details.

   i. Note: Rock as-builts required prior to paving. Consultant shall review rock as-builts within five days of receipt.

l. Retention area and swale as-built elevations shall be taken at the bottom of the retention area and at the top of bank. If there are contours indicated on the design plans, then they shall be as-built as well

m. If a change is made via field order or deviation to any structure, pipeline, etc., a new location shall be noted on the as-builts. The CITY PROJECT MANAGER may request additional as-built information to verify horizontal or vertical locations.

1.6 SUBMITTAL

A. Submittals of final AS-BUILT DRAWINGS shall be made at the completion of

a. the drainage system;

b. the entire project.

As-builts shall also be submitted with monthly pay requests. At Contract closeout, deliver all Record Documents to CITY PROJECT MANAGER, for presentation to the OWNER.

B. A complete set of AS-BUILT DRAWINGS shall be prepared and delivered to the CITY PROJECT MANAGER. WORK shall be performed by a Registered Professional Surveyor and Mapper shall include, but not be limited to the following:

a. Valve boxes, splice boxes, pull boxes, all underground utilities-waterlines, electrical runs, storm drainage pipe and structures, sanitary sewer lines and structures, finished necessary grades, benches, curbs, fences, walls, signs, light fixtures and other items as necessary in accordance with CITY Record Plan/As-built plan requirements.

C. Accompany submittal with transmittal letter in duplicate, containing:

a. Date.

b. Project title and number.

c. CONTRACTOR's name and address.

d. Title and number of each Record Document.

e. Signature of CONTRACTOR or authorized representative.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01340 – SUBMITTAL PROCEDURES

PART 1 GENERAL

1.3 RELATED DOCUMENTS

E. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.4 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Sections include the following:

a. Section 01152, Applications for Payment

b. Section 01050, Project Management

c. Section 01311, Construction Progress Documentation

d. Section 01340, Construction Photographs

e. Section 01400, Quality Control

f. Section 01700, Contract Closeout

g. Section 01720, Project Record Documents

h. Divisions 02 through 16 Sections for specific requirements for submittals in those Sections.

1.5 DEFINITIONS

A. Action Submittals. Written and graphic information that requires Engineer's responsive action.

B. Informational Submittals. Written information that does not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.6 SUBMITTAL PROCEDURES

A. Coordination. Coordinate preparation and processing of submittals with performance of construction activities.

a. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

b. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

i. City reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Submittals Schedule. Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.

C. Processing Time. Allow enough 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.

a. Initial Review. Allow 10 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.

b. Intermediate Review. If intermediate submittal is necessary, process it in same manner as initial submittal.

c. Resubmittal Review. Allow 10 days for review of each resubmittal.

D. Identification. Place a permanent label or title block on each submittal for dentification.

a. Indicate name of firm or entity that prepared each submittal on label or title block.

b. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by City.

c. Include the following information on label for processing and recording action taken:

i. Project name.

ii. Date

iii. Name and address of Contractor.
iv. Name and address of subcontractor.

v. Name and address of supplier.

vi. Name of manufacturer.

vii. Submittal number or other unique identifier, including revision identifier.

a. Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).

viii. Number and title of appropriate Specification Section.

ix. Drawing number and detail references, as appropriate.

x. Location(s) where product is to be installed, as appropriate.

xi. General Contractor's stamp of approval must be on all submittals, indicating that the Contractor has reviewed and approved prior to submitting to the City.

E. Deviations. Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

F. Additional Copies. Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

G. Transmittal. Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will return submittals, without review, received from sources other than Contractor.

a. Transmittal Form. Provide locations on form for the following information:

i. Project name.

ii. Date.

iii. Destination (To:).

iv. Source (From:).

v. Names of subcontractor, manufacturer, and supplier.

vi. Category and type of submittal.

vii. Submittal purpose and description.

viii. Specification Section number and title.

ix. Drawing number and detail references, as appropriate.

x. Transmittal number numbered consecutively.

xi. Remarks.

xii. Signature of transmitter.

H. Resubmittals. Make resubmittals in same form and number of copies as initial submittal.

a. Note date and content of previous submittal.

b. Note date and content of revision in label or title block and clearly indicate extent of revision.

c. Resubmit submittals until they are marked "Approved as submitted" or “Approved as noted”.

I. Distribution. Furnish copies of final submittals to manufacturers, subcontractors, suppliers, Fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction. Use only final submittals with mark indicating "Approved as submitted" or “Approved as noted” by Engineer.

PART 2 PRODUCTS

2.1 ACTION SUBMITTALS

A. General. Prepare and submit Action Submittals required by individual Specification Sections.

B. Product Data. Collect information into a single submittal for each element of construction and type of product or equipment.

a. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.

b. Mark each copy of each submittal to show which products and options are applicable.

c. Include the following information, as applicable:

i. Manufacturer's written recommendations.

ii. Manufacturer's product specifications.

iii. Manufacturer's installation instructions.

iv. Standard color charts.

v. Manufacturer's catalog cuts.

vi. Wiring diagrams showing factory-installed wiring.

vii. Printed performance curves.

viii. Operational range diagrams.

ix. Mill reports.

x. Standard product operation and maintenance manuals.

xi. Compliance with specified referenced standards.

xii. Testing by recognized testing agency.

xiii. Application of testing agency labels and seals.

xiv. Notation of coordination requirements.

d. Submit Product Data before or concurrent with Samples.

e. Number of Copies. Submit five copies of Product Data, unless otherwise indicated. Engineer will return two copies. Mark up and retain one returned copy as a Project Record Document.

C. Shop Drawings. Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

a. Preparation. Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

i. Dimensions.

ii. Identification of products.

iii. Fabrication and installation drawings.

iv. Roughing-in and setting diagrams.
v. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.

vi. Shopwork manufacturing instructions.

vii. Templates and patterns.

viii. Schedules.

ix. Design calculations.

x. Compliance with specified standards.

xi. Notation of coordination requirements.

xii. Notation of dimensions established by field measurement.

xiii. Relationship to adjoining construction clearly indicated.

xiv. Seal and signature of professional engineer if specified.

xv. Wiring Diagrams. Differentiate between manufacturer-installed and field- installed wiring.

b. Sheet Size. Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches (750 by 1000 mm).

c. Number of Copies. Submit five opaque copies of each submittal. City will retain three copies; remainder will be returned.

D. Samples. Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

a. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.

b. Identification. Attach label on unexposed side of Samples that includes the following:

i. Generic description of Sample.

ii. Product name and name of manufacturer.

iii. Sample source.

iv. Number and title of appropriate Specification Section.

c. Disposition. Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity.

Sample sets may be used to determine final acceptance of construction associated with each set.

i. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.

ii. Samples not incorporated into the Work, or otherwise designated as City's property, are the property of Contractor.

d. Samples for Initial Selection. Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

i. Number of Samples. Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. City will return submittal with options selected.

e. Samples for Verification. Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

i. Number of Samples. Submit three sets of Samples. City will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.

a. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.

b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Product Schedule or List. As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

a. Type of product. Include unique identifier for each product.

b. Number and name of room or space.

c. Location within room or space.

d. Number of Copies. Submit five copies of product schedule or list, unless otherwise indicated. City will return two copies.

i. Mark up and retain one returned copy as a Project Record Document.

F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Construction Manager's action.

G. Submittals Schedule. Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

H. Application for Payment. Comply with requirements specified in Division 01 Section "Payment Procedures."

I. Schedule of Values. Comply with requirements specified in Division 01 Section "Payment Procedures."

J. 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:

a. Name, address, and telephone number of entity performing subcontract or supplying products.

b. Number of Copies. Submit four copies of subcontractor list, unless otherwise indicated. City will return two copies.

i. Mark up and retain one returned copy as a Project Record Document.

2.2 INFORMATIONAL SUBMITTALS

A. General. Prepare and submit Informational Submittals required by other Specification Sections.

a. Number of Copies. Submit two copies of each submittal, unless otherwise indicated. City will not return copies.

b. Certificates and Certifications. Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

c. Test and Inspection Reports. Comply with requirements specified in Division 01 Section "Quality Requirements."

B. Coordination Drawings. Comply with requirements specified in Division 01 Section "Project Management and Coordination."

C. Contractor's Construction Schedule. Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

D. Installer Certificates. Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

E. Product Certificates. Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

F. Material Certificates. Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

G. Material Test Reports. Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

H. Field Test Reports. Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

I. Insurance Certificates and Bonds. Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

J. Construction Photographs. Comply with requirements specified in Section 01380.

PART 3 EXECUTION

3.1 CONTRACTOR'S REVIEW

A. 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.

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, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

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:

a. Approved as submitted

b. Approved as noted

c. Revise and resubmit

d. Rejected.

C. Informational Submittals. Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.

D. Partial 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

SECTION 01380 – CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.1 GENERAL

A. Employ competent photographer to take construction record photographs periodically, monthly at a minimum, during course of the work.

1.2 RELATED REQUIREMENTS

A. Section 01010: Summary of Work.

B. Section 01720: Project Record Documents.

1.3 PHOTOGRAPHY REQUIRED

A. Provide photographs taken on cutoff date for each scheduled application for Payment.

B. Provide photographs taken at each major stage of construction.

C. Provide photographs taken of change order work.

D. Provide five prints of each view.

E. Negatives:

a. Remain property of photographer.

b. Require that photographer maintain negatives for a period of two years from Date of Substantial Completion of entire Project.

c. Photographer shall agree to furnish additional prints to OWNER and the ENGINEER at commercial rates applicable at time of purchase.

1.4 COSTS OF PHOTOGRAPHY

A. CONTRACTOR shall pay costs for specified photography and prints.

a. Parties requiring additional photography or prints will pay photographer directly.

1.5 DIGITAL PHOTOGRAPHY

A. At OWNER and ENGINEER's discretion, digital photography may be used for all construction photographs except aerial progress photographs.

PART 2 PRODUCTS

2.1 PRINTS

A. Color:

a. Paper: Single weight, color print paper.

b. Finish: Smooth surface, glossy.

c. Size: 8-inch x 10-inch.

B. Identify each print on back, listing:

a. Name of Project.

b. Specific Location.

c. Date and time of exposure.

d. Name and address of photographer.

e. Photographer's numbered identification of exposure.

PART 3 EXECUTION

3.1 TECHNIQUE

A. Factual presentation.

B. Correct exposure and focus.

a. High resolution and sharpness.

b. Maximum depth-of-field.

c. Minimum distortion.

3.2 VIEWS REQUIRED

A. Photograph from locations to adequately illustrate condition of construction and state of progress.

B. Photographs shall include aerial photographs showing the entire construction area.

3.3 DELIVERY OF PRINTS

A. Deliver prints to the ENGINEER to accompany each Application for Payment.

B. Distribution of prints as soon as processed, is anticipated to be as follows:

a. OWNER (one set).

b. ENGINEER (two sets).

c. Project Record File (one set to be stored by CONTRACTOR).

d. CONTRACTOR (one set).

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION

SECTION 01400 – QUALITY CONTROL

PART 1 GENERAL

1.1 DEFINITION

A. Specific quality control requirements for the WORK are indicated throughout the Contract and Permit Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

1.2 INSPECTION AT PLACE OF MANUFACTURE

A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.

B. The presence of the ENGINEER at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for furnishing products, materials, and equipment, which comply with all requirements of the Contract Documents. Compliance is a duty of the CONTRACTOR, and said duty shall not be avoided by any act or omission on the part of the ENGINEER.

1.3 SAMPLING AND TESTING

A. Unless otherwise indicated, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered.

B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.

C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

1.4 INSPECTION AND TESTING LABORATORY SERVICE

A. Inspection and testing laboratory service shall comply with the following:

a. CONTRACTOR shall appoint, employ, and pay for services of an independent firm to perform inspection and testing.
b. The independent testing firm will perform inspections, testing and other

services specified in individual specification sections and as required by the ENGINEER or OWNER.

c. Reports will be submitted to the ENGINEER in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

d. The CONTRACTOR shall cooperate with the OWNER and independent testing firm and furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.

e. The CONTRACTOR shall notify ENGINEER and any applicable permitting agencies 48 hours prior to the expected time for operations requiring inspection and laboratory testing services, so they can be present at the time of testing

f. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the ENGINEER. The CONTRACTOR shall bear all costs from such retesting at no additional cost to the OWNER.

g. For samples and tests required for CONTRACTOR'S use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of all sampling and testing shall be included in the Contract Price.

h. CONTRACTOR shall bear all costs incurred should the materials for testing not be ready for testing at time specified/scheduled by CONTRACTOR for test.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 INSTALLATION

A. Inspection. The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.

B. Measurements. The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.

C. Manufacturer's Instructions. Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

END OF SECTION

SECTION 01410 – TESTING LABORATORY SERVICES

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. CONTRACTOR will employ and pay for the services of an Independent Testing laboratory to perform all required testing: (All required testing services under the Contract and Permit Documents shall be provided by the CONTRACTOR through an independent testing firm.

a. CONTRACTOR shall cooperate with the laboratory to facilitate the execution of its required services.

b. Employment of the laboratory by the CONTRACTOR for specific testing shall in no way relieve the CONTRACTOR's obligations to perform the work of the Contract as specified.

c. The tests to be provided by the CONTRACTOR shall include, but not be limited to, the following

i. Density

ii. Proctor

iii. Limerock Bearing Ratio (LBR)

iv. Carbonate Content

v. Gradation

vi. Plastic Index and Liquid Limit

vii. Organic Content

viii. Concrete Compressive Strength and Slump

ix. Asphalt Extraction

x. Any other tests as required to satisfy an permitting agency requirements.

B. CONTRACTOR shall pay for all required testing, including bacteriological testing.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract: Inspections and testing required by laws,

ordinances, rules, regulations, orders or approvals of public authorities.

1.3 QUALIFICATION OF LABORATORY

A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.

B. Meet basic requirements of ASTM E-329.

C. Authorized to operate in the state in which the project is located.

D. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of Natural Bureau of Standards during the most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

E. Testing Equipment

a. Calibrated at reasonable intervals by devices of accuracy traceable to either:

i. National Bureau of Standards.

ii. Accepted values of natural physical constants.

1.4 LABORATORY DUTIES

A. Cooperate with OWNER's Representative and CONTRACTOR; provide qualified personnel after due notice.

B. Perform specified inspections, sampling and testing of materials and methods of construction:

a. Comply with specified standards.

b. Ascertain compliance of materials with requirements of Contract Documents.

C. Promptly notify OWNER's Representative and CONTRACTOR of observed irregularities of deficiencies of work or products.

D. Promptly submit written report of each test and inspection; one copy each to OWNER's Representative, OWNER, CONTRACTOR, and one copy to Record Document File. Each report shall include:

a. Date issued.

b. Project title, OWNER'S project number and Parcel number.

c. Testing laboratory name, address and telephone number.

d. Name and signature of laboratory inspector.

e. Date and time of sampling or inspection.

f. Record of temperature and weather conditions.

g. Date of test.

h. Identification of fill product and specification section.

i. Location of sample or test in the project area (i.e. station and offset or other relevant dimensioning).

j. Type of inspection or test.

k. Results of tests and compliance with Contract Documents.

l. Interpretation of test results, when requested by OWNER's Representative.

E. Perform additional tests as required by the OWNER's Representative.

1.5 LIMITATION OF AUTHORITY OF TESTING LABORATORY

A. Laboratory is not authorized to:

a. Release, revoke, alter or enlarge on requirements of Contract documents.

b. Approve or accept any portion of the work.

c. Perform any duties of the CONTRACTOR.

1.6 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel and provide access to work.

B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes, which require control by the Testing Laboratory.

D. Furnish copies of Products test reports as required.

E. Furnish incidental labor and facilities:

a. To provide access to work to be tested.

b. To obtain and handle samples at the project site or at the source of the product to be tested.

c. To facilitate inspections and tests.

d. For storage of test samples.

F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

a. When tests or inspections cannot be performed after such notice, reimburse OWNER for laboratory personnel and travel expenses incurred due to CONTRACTOR's negligence.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section. It shall be included in the price for all other work.

END OF SECTION

SECTION 01505 – MOBILIZATION

PART 1 GENERAL

1.1 GENERAL

A. Mobilization shall include the obtaining of all permits; moving onto the site of all equipment; temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:

a. Moving on to the site of all CONTRACTOR's equipment required for first month operations.

b. Installing temporary construction power, wiring, and lighting facilities.

c. Developing construction water supply.

d. Providing field office trailers for the CONTRACTOR, complete with all specified furnishings and utility services including telephones, telephone appurtenances, and copying machine.

e. Providing all on-site communication facilities, including telephones and radio pagers.

f. Providing on-site sanitary facilities and potable water facilities.

g. Arranging for and erection of CONTRACTOR's work, site access, and storage.

h. Obtaining all required permits (including Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) permits as needed).

i. Having all OSHA required notices and establishment of safety programs.

j. Having the CONTRACTOR's superintendent at the job site full time.

k. Submitting initial submittals.

l. Audio-Visual preconstruction record as described in Section 01010.

m. Project identification and signs.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PAYMENT FOR MOBILIZATION

A. The CONTRACTOR's attention is directed to the condition that no payment for mobilization or any part thereof will be approved for payment under the Contract until all mobilization items listed in Paragraph 1.1.A. above have been completed as specified.

END OF SECTION

SECTION 01520 – CONSTRUCTION AIDS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Furnish, install and maintain required construction aids, remove on completion of work.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.2 CONSTRUCTION AIDS

A. Provide construction aids and equipment required by personnel and to facilitate execution of the work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such facilities and equipment.

a. Refer to respective sections for particular requirements for each trade.

b. Provide protective coverings for finished surfaces.

B. Maintain facilities and equipment in first-class condition.

PART 3 EXECUTION

3.1 PREPARATION

A. Consult with OWNER's Representative, review site conditions and factors which affect construction procedures and construction aids including adjacent properties and public facilities which may be affected by execution of thework.

3.2 GENERAL

A. Comply with applicable requirements specified in sections of Division 2 through 4 (as applicable).

B. Relocate construction aids as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements of OWNER and other Contractor’s employer at the site.

3.3 REMOVAL

A. Completely remove temporary materials, equipment and services:

a. When construction needs can be met by use of permanent construction.

b. At completion of project.

B. Clean, repair damage caused by installation or by use of temporary facilities.

a. Remove foundations and underground installations for construction aids.

b. Grade areas of site affected by temporary installations to required elevations and slopes, and clean the area.

C. Restore permanent facilities used for temporary purposes to specified condition.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, i t shall be included in the price of all other work.

END OF SECTION

SECTION 01530 – PROTECTION OF EXISTING FACILITIES

PART 1 GENERAL

1.1 GENERAL

A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.

B. The CONTRACTOR shall verify the exact locations and depths of all utilities shown and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the WORK. All such exploratory excavations shall be performed as soon as practicable after award of the contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's work. When such exploratory excavations show the utility location as shown to be in error, the CONTRACTOR shall so notify the ENGINEER.

C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.2 RIGHTS-OF-WAY

A. The CONTRACTOR shall not do any work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified by the ENGINEER that the OWNER has secured authority from the proper party. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support or otherwise protect such pipeline, transmission line, ditch, fence, or structure or replace the same. When two or more contracts are being executed at one time on the same or adjacent land in such manner that work on one contract may interfere with that on another, the OWNER shall determine the sequence and order of the WORK. When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the OWNER to the CONTRACTOR so desiring, to the extent, amount, in the manner, and at the times permitted. No such decision as to the method or time of conducting the WORK or the use of territory shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the WORK in the General Conditions of the Contract.

1.3 PROTECTION OF STREET OR ROADWAY MARKERS

A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any

existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. All survey markers or points disturbed by the CONTRACTOR shall be accurately restored after all streets or roadway resurfacing has been completed.

1.4 RESTORATION OF PAVEMENT

A. General. All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. All temporary and permanent pavement shall conform to the requirements of the affected pavement OWNER. All pavements which are subject to partial removal shall be neatly saw cut in straight lines.

B. Temporary Resurfacing. Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.

C. Permanent Resurfacing. In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.

D. Restoration of Sidewalks or Private Properties. Wherever sidewalks or private properties and driveways have been removed for purposes of construction, the CONTRACTOR shall place suitable temporary sidewalks or driveways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or, if no such period of times is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or driveways until the final restoration thereof has been made. The CONTRACTOR shall restore all private properties within thirty (30) days after a complaint is received by the OWNER.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

A. General. The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other

improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

B. Utilities to be Moved. In the case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.

C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the ENGINEER and the OWNER of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

D. OWNER's Right of Access. The right is reserved to the OWNER and to the OWNERs of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.

E. Underground Utilities Indicated. Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR.

F. Underground Utilities Not Indicated. In the event that the CONTRACTOR damages any existing utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the ENGINEER. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions for changes and extra work contained in the General Conditions.

G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of the General Conditions.

H. Approval of Repairs. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement OWNER and the ENGINEER before being concealed by backfill or other work.

I. Maintaining in Service. All oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

J. Existing Water Services. CONTRACTOR shall protect and provide temporary support for existing water services. Any water service damaged by the CONTRACTOR shall be replaced at the CONTRACTOR's expense, with a new water service complete with new water main tap.

1.6 TREES WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

A. General. The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of- way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or OWNER. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company under permit from the jurisdictional agency and/or the OWNER. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.

B. Trimming. Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1-1/2 inches in diameter shall be coated with an asphaltic emulsion material.

C. Replacement. The CONTRACTOR shall immediately notify the jurisdictional agency and/or the OWNER if any tree is damaged by the CONTRACTOR's operations. If, in the opinion of said agency or the OWNER, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree at CONTRACTOR’s own expense. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the CONTRACTOR shall pay to the OWNER of said tree a compensatory payment acceptable to the tree OWNER, subject to the approval of the jurisdictional agency or OWNER. The size of the trees shall be not less than 1-inch diameter nor less than 6 feet in height.

1.7 NOTIFICATION BY THE CONTRACTOR

A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the CONTRACTOR shall notify the respective authorities representing the OWNERs or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said OWNERs or agencies can be present during such work if they so desire. The CONTRACTOR shall also notify the Sunshine State One Call Center 1-800-432-4770 at least 2 days, but no more than 14 days, prior to such excavation.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.2 FENCING

A. Materials to CONTRACTOR's option, minimum fence height = 6 feet.

2.3 BARRIERS

A. Materials to CONTRACTOR's option, as appropriate to serve required purpose.

PART 3 EXECUTION

3.1 GENERAL

A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for required purposes.

B. Maintain barriers during entire construction period.

C. Relocate barriers as required by progress of construction.

3.2 TREE AND PLANT PROTECTION

A. Preserve and protect existing trees and plants adjacent to work areas.

B. Consult with OWNER's Representative and remove agreed-on roots and branches which interfere with work.

a. Employ qualified tree surgeon to remove branches, and to treat cuts.

C. Protect root zones of trees and plants.

a. Do not allow vehicular traffic and parking.

b. Do not store materials or products.

c. Prevent dumping of refuse or chemically injurious materials or liquids.

d. Prevent puddling or continuous running water.

D. Carefully supervise all work to prevent damage.

E. Replace trees and plants which are damaged or destroyed due to work operations under this contract.

3.3 REMOVAL

A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by OWNER's Representative.

B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of all other work.

END OF SECTION

SECTION 01550 – SITE ACCESS AND STORAGE

PART 1 GENERAL

1.1 HIGHWAY LIMITATIONS:

A. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the WORK. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

1.2 TEMPORARY CROSSINGS:

A. General. Continuous, unobstructed, safe, and adequate pedestrian and vehicular access shall be provided to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, service stations, motels, fire and police stations, and hospitals. Safe and adequate public transportation stops and pedestrian crossings at intervals not exceeding 300 feet shall be provided. The CONTRACTOR shall cooperate with parties involved in the delivery of mail and removal of trash and garbage so as to maintain existing schedules for such services. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access for reasonable periods of time.

B. Temporary Bridges. Wherever necessary, the CONTRACTOR shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges or steel plates, which written consent shall be delivered to the ENGINEER prior to excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges or steel plates for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.

C. Street Use. Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the WORK hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise indicated. Toe boards shall be provided to retain excavated material if required by the ENGINEER or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the WORK shall be kept accessible to fire-fighting

equipment at all times. Temporary

provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, storm drain inlets, and other drainage facilities.

D. Traffic Control

a. For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of Broward County and the "Manual of Uniform Traffic Control Devices, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations," published by U.S. Department of Transportation, Federal Highway Administration (ANSI D6.1).

b. The CONTRACTOR shall take all necessary precautions for the protection of the WORK and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The CONTRACTOR shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of the Florida Department of Transportation.

c. The CONTRACTOR shall submit 3 copies of a traffic control plan to the ENGINEER for approval a minimum of 2 weeks prior to construction. The ENGINEER reserves the right to observe these traffic control plans in use and to make any changes as field conditions warrant. Any changes shall supersede these plans and be done solely at the CONTRACTOR's expense.

d. The CONTRACTOR shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.

E. Temporary Driveway Closure. The CONTRACTOR shall notify the OWNER or occupant (if not Owner-occupied) of the closure of the driveways to be closed more than one eight-hour work day at least 3 working days prior to the closure. The CONTRACTOR shall minimize the inconvenience and minimize the time period that the driveways will be closed. The CONTRACTOR shall fully explain to the OWNER/occupant how long the work will take and when closure is to start. Total closure time shall not exceed 5 days.

1.3 CONTRACTOR'S WORK AND STORAGE AREA:

A. The CONTRACTOR shall designate and arrange for the use of a portion of the property, adjacent to the WORK for its exclusive use during the term of the

Contract as a storage and shop area for its construction operations relative to this Contract.

B. The CONTRACTOR shall make its own arrangements for any necessary off- site storage or shop areas necessary for the proper execution of the WORK.

C. The CONTRACTOR shall construct and use a separate storage area for hazardous materials used in constructing the WORK.

a. For the purpose of this paragraph, hazardous materials to be stored in the separate area are all products labeled with any of the following terms: Warning, Caution, Poisonous, Toxic, flammable, Corrosive, Reactive, or Explosive. In addition, whether or not so labeled, the following materials shall be stored in the separate area: diesel fuel, gasoline, new and used motor oil, hydraulic fluid, cement, paints and paint thinners, two- part epoxy coatings, sealants, asphaltic products, glues, solvents, wood preservatives, sand blast materials, and spill absorbent.

b. Hazardous materials shall be stored in groupings according to the Material Safety Data Sheets.

c. The CONTRACTOR shall develop and submit to the ENGINEER a plan for storing and disposing of the materials above.

d. The CONTRACTOR shall obtain and submit to the ENGINEER a single EPA number for wastes generated at the site.

e. The separate storage area shall meet all the requirements of all authorities having jurisdiction over the storage of hazardous materials.

f. All hazardous materials which are delivered in containers shall be stored in the original containers until use. Hazardous materials which are delivered in bulk shall be stored in containers which meet the requirements of authorities having jurisdiction.

1.4 PARKING:

A. The CONTRACTOR shall:

a. Provide temporary parking areas for ENGINEER and OWNER’s use.

b. The CONTRACTOR shall direct its employees to park in designated areas secured by the CONTRACTOR.

c. Traffic and parking areas shall be maintained in a sound condition, free of excavated material, construction equipment, mud, and construction

materials. The CONTRACTOR shall repair breaks, potholes, low areas which collect standing water, and other deficiencies.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of Mobilization and of all other work.

END OF SECTION

SECTION 01560 – TEMPORARY CONTROLS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Provide and maintain methods, equipment, and temporary construction, a s necessary, to provide controls over environmental conditions at the construction site and related area under CONTRACTOR's control; remove physical evidence of temporary facilities at completion of work.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 NOISE CONTROL

A. Provide all necessary requirements for noise control during the construction period.

a. Noise procedures shall conform to all applicable OSHA requirements and local ordinances having jurisdiction on the work.

b. Noise levels during nighttime hours shall not exceed 55 db measured at the property line of a residence.

1.4 DUST CONTROL

A. Provide positive methods and apply dust control materials to minimize raising dust from construction operations, and provide positive means to prevent air- borne dust from dispersing into the atmosphere.

1.5 WATER CONTROL

A. Provide methods to control surface water to prevent damage to the project, the site, or adjoining properties.

a. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.

B. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface and water.

C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

1.6 PEST CONTROL

A. Provide pest control as necessary to prevent infestation of construction or storage area.

a. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.

b. Should the use of pesticides be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to ENGINEER. Clearly indicate:

i. The area or areas to be treated.

ii. The pesticide to be used, with a copy of the manufacturer's printed instructions.

iii. The pollution preventative measures to be employed.

B. The use of any pesticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.7 RODENT CONTROL

A. Provide rodent control as necessary to prevent infestation of construction or storage area.

a. Employ methods and use materials, which will not adversely affect conditions at the site or on adjoining properties

b. Should the use of rodenticide be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to OWNER's Representative. Clearly indicate:

i. the area or areas to be treated.

ii. the rodenticide to be used, with a copy of the manufacturer's printed instructions.

iii. the pollution preventative measures to be employed.

B. The use of any rodenticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.8 DEBRIS CONTROL

A. Maintain all areas under CONTRACTOR's control free of extraneous debris.

B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking area, or along access roads and haul routes.

a. Provide containers for deposit of debris as specified in Section 01710 -

Cleaning.

b. Prohibit overloading of trucks to prevent spillage on access and haul routes.

c. Provide periodic inspection of traffic areas to enforce requirements.

C. Schedule periodic collections and disposal of debris as specified in Section 01710 - Cleaning.

a. Provide additional collections and disposal of debris whenever the periodic schedule is to prevent accumulation.

1.9 POLLUTION CONTROL

A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.

B. Provide equipment and personnel, perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids.

a. Excavate and dispose of any contaminated earth off-site and replace with suitable compacted fill and topsoil.

C. Take special measures to prevent harmful substances from entering public waters.

a. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.

D. Provide systems for control of atmospheric pollutants.

a. Prevent toxic concentrations of chemicals.

b. Prevent harmful dispersal of pollutants into the atmosphere.

1.10 EROSION CONTROL

A. Plan and execute construction and earthwork, by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas to prevent erosion and sedimentation.

a. Hold the areas of bare soil exposed at one time to a minimum

b. Provide temporary control measures such as berms, dikes and drains.

c. Provide silt screens as required preventing surface water contamination.

B. Construct fills and waste areas by selective placement to eliminate surface

silts or clays, which will erode.

C. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.

D. All erosion control procedures must comply with the National Pollutant Discharge Elimination System (NPDES).

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION

SECTION 01570 – TRAFFIC REGULATIONS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Provide, operate and maintain equipment, services and personnel, with traffic control and protective devices, as required to expedite vehicular traffic flow to provide safe and expeditious movement of traffic through and on haul routes, at site entrances, in construction zones, on-site access roads, and parking areas including driving and/or walking public.

B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or specified conditions.

C. The requirements specified herein are in addition to the plan for Traffic Regulations as specified in Section 01570.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 TRAFFIC SIGNALS AND SIGNS

A. Provide and operate traffic control and directional signals or signs required to direct and maintain an orderly flow of traffic in all areas under CONTRACTOR's control, or affected by CONTRACTOR's operations.

1.4 FLAGPERSON

A. Provide qualified and suitably equipped flag-person when construction operations encroach on traffic lanes, as required for regulation oftraffic.

1.5 FLARES AND LIGHTS

A. Provide flares and lights during periods of low visibility:

a. To clearly delineate traffic lanes and to guide traffic.

b. For use of flag-person in directing traffic.

B. Provide illumination of critical traffic and parking areas.

a. Maintain free vehicular access to and through parking areas.

b. Prohibit parking on or adjacent to access roads, or in non-designated areas.

1.6 HAUL ROUTES

A. Consult with OWNER and governing authorities, establish public thorough fares which will be used as haul routes and site access.

B. Confine construction traffic to designated haul routes.

C. Provide traffic control at critical areas of haul routes to expedite traffic flow, to minimize interference with normal public traffic.

1.7 EMERGENCY ACCESS

A. In order to provide protection to the workers and residents, the Contractor shall maintain emergency access to all adjacent properties at all times during construction. If a road is required to be closed to vehicular traffic and the distance of the closure exceeds 150 feet between stabilized surfaces, or prevents access to properties for a distance that exceeds 150 feet, the Contractor shall provide a 10-foot-wide stabilized access way on one side of the trench capable of supporting a Fire Truck. Contractor shall also provide stabilized access ways across the trench or un-stabilized area a minimum of 6 feet in width at a spacing not to exceed 100 feet capable of supporting foot traffic. These access ways shall be protected and delineated with lighted barricades or other such devices as approved by the regulatory agency. Both ends of the emergency access way shall be blocked in accordance with the MOT permit approved by the City of Fort Lauderdale and FDOT with signage indicating that this access way is to be used by emergency vehicles only.

No trenches or holes shall be left open after working hours. In the event a trench must be left open after hours, it shall be done so only with the express written permission from the Engineer, and it shall be the Contractor's responsibility to provide proper protection of the open trench or hole as required by the regulatory agency. In addition, the Contractor shall provide a security guard at the site whenever the Contractor's personnel are not present,
24 hours per day/ 7 days per week. It shall be the Security Guard's responsibility to protect the open trench or hole from trespassers and to direct emergency personnel on site. The Security Guard shall not have any other responsibilities such as operation pumps or equipment but shall be dedicated to protecting the trench or open hole. The Security Guard shall be equipped with a wireless telephone capable of calling 911 to report an emergency and shall keep that telephone on their person at all times. In addition to this provision the contractor shall maintain trench safety and comply with current OSHA regulations and the Trench Safety Act. The contractor shall maintain and keep all safety barricades, signage, flashers, and detours, in operation condition. A copy of the approved MOT plans, and details, shall be on site at all times.

B. Measurement and payment for security guard services shall be included in the utility pipe installation unit price. Measurement for temporary emergency access ways will be paid for under the specified line item at the unit price described in the bid schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. There shall be no special measurement and payment for work under the section; it shall be included in the lump sum price bid for Maintenance of Traffic.

END OF SECTION

SECTION 01590 – PROJECT SIGN

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Contractor shall furnish a 4’ x 8’ sign, below is a sample, not specific to the project.

B. Sign shall be made to be weather resistant and on display for entire length of contract.

C. Shop drawings must be submitted prior to sign construction.

D. The exact style and design of the sign will be provided during the preconstruction meeting.

See Page 2, “Construction Sign Request Form”, for information on the sign for this Project.

END OF SECTION

Construction Sign Request Form P118700

Title (Bold):

Title (Not Bold):

What's Happening?

Benefits:

Number of Neighbors Benefitted:

Cost:

Month and Year of Expected Completion:

Contractor:

Phone: 954-828-8000

We're Working On:

Project Manager Signature	Date

Senior Project Manager Signature	Date

SECTION 01600 – MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Material and equipment incorporated into the work:

a. Conform to applicable specifications and standards.

b. Comply with size, make, type and quality specified, or as specifically approved in writing by the OWNER's Representative.

c. Manufactured and fabricated products:

i. Design, fabricate and assemble in accord with the best engineering and shop practices.

ii. Manufacture like parts of duplicate units to standard sizes and gauges to be interchangeable.

iii. Two or more items of the same kind shall be identical, by the same manufacturer.

iv. Products shall be suitable for service conditions.

v. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.

d. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 MANUFACTURER'S INSTRUCTIONS

A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to OWNER's Representative. Maintain one set of complete instructions at the job site during installation and until completion.

B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.

a. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with OWNER's Representative for further instructions.

b. Do not proceed with work without clear instructions.

C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.4 TRANSPORTATION AND HANDLING

A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site. Products shall be delivered to the job site on an "as needed" basis.

a. Deliver products in undamaged condition, in manufacturers' original containers or packaging, with identifying labels intact with legible markings.

b. Immediately upon delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.

c. Pipe and materials shall not be strung out along installation routes for longer than two (2) weeks prior to installation.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

C. Coordinate deliveries to avoid conflict with Work and conditions at site:

a. Work of other contractors, or OWNER.

b. Limitations of storage space.

c. Availability of equipment and personnel for handling products.

d. OWNER's use of premises.

D. Deliver products in undamaged condition in original containers or packaging, with identifying labels intact and legible.

E. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts and to facilitate assembly.

F. Immediately on delivery, inspect shipment to assure:

a. Product complies with requirements of Contract Documents and reviewed submittals.

b. Quantities are correct.

c. Containers and packages are intact, labels are legible.

d. Products are properly protected and undamaged.

G. Provide equipment and personnel necessary to handle products, including those provided by OWNER, by methods to prevent soiling or damage to products or packaging.

H. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.

I. Handle products by methods to prevent bending or overstressing.

J. Lift heavy components only at designated lifting points.

1.5 STORAGE

A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.

a. Store products subject to damage by the elements in weather-tight enclosures.

b. Maintain temperature and humidity within the ranges required by manufacturer's instructions.

c. Store unpacked products on shelves, in bins or in neat piles, accessible for inspection.

B. Exterior Storage

a. Provide substantial platforms, blocking or skids to support fabricating products above ground, prevent soiling or staining.

i. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.

b. Store loose granular materials on solid surface such as paved areas, or provide plywood or sheet materials to prevent mixing with foreign matter.

i. Provide surface drainage to prevent flow or ponding of rainwater.

ii. Prevent mixing of refuse or chemically injurious materials or liquids.

1.6 MAINTENANCE OF STORAGE

A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:

a. State of storage facilities is adequate to provide required conditions.

b. Required environmental conditions are maintained on continuing basis.

c. Surfaces of products exposed to elements are not adversely affected.

i. Any weathering of products, coatings and finishes is not acceptable under requirements of Contract Documents.

B. Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.

1.7 PROTECTION AFTER INSTALLATION

A. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.

B. Control traffic to prevent damage to equipment and surfaces.

C. Provide coverings to protect finished surfaces from damage.

a. Cover projections, wall corners, and jambs, sills and soffits of openings, in areas used for traffic and for passage of products in subsequent work.

b. Protect finished floors and stairs from dirt and damage.

i. In areas subject to foot traffic, secure heavy paper, sheet goods, or other materials in place.

ii. For movement of heavy products, lay planking or similar materials in place.

iii. Cover wall and floor surfaces in the vicinity of construction personnel activities and all finished surfaces used by construction personnel.

D. Waterproofed surfaces

a. Prohibit use of surfaces for traffic of any kind, and for storage of any products.

b. When some activity must take place in order to carry out the Contract,

obtain recommendations of installer for protection of surface.

i. Install recommended protection; remove on completion of that activity.

ii. Restrict use of adjacent unprotected areas.

E. Lawns and landscaping

a. Prohibit traffic of any kind across planted lawn and landscaped areas.

F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

1.8 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Limitations on substitutions.

a. During bidding period, Instructions to Bidders govern times for submitting requests for substitutions under requirements specified in this section.

b. Substitutions will not be considered when indicated on shop drawings or product data submittals without separate formal request, when requested directly by Subcontractor or supplier, or when acceptance will require substantial revision of Contract Documents.

c. Substitute products shall not be ordered or installed without written acceptance.

d. Only one (1) request for substitution for each product will be considered. When substitution is not accepted, provide specified product.

B. Products List

a. Within 15 days after Contract Date submit to ENGINEER a complete list of major products proposed to be used, with the name of the manufacturer and the installing Subcontractor.

C. Contractors Options

a. For products specified only by reference standard, select any product meeting that standard.

b. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named or approved equal, which complies with the Specifications.

c. For products specified by naming one or more products or manufacturers and "or approved equal," CONTRACTOR must submit a request as for

substitutions for any product or manufacturer not specifically named.

D. Substitutions

a. For a period of 15 days after Contract Date, ENGINEER will consider written request from CONTRACTOR for substitution of products.

b. Identify product by specification Section and Article Numbers. Provide manufacturer's name and address, trade name of product, and model of catalog number. List fabricators and suppliers as appropriate.

c. List similar projects using product, dates of installation, and names of ENGINEER and OWNER.

d. List availability of maintenance services and replacement materials.

e. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate, including:

i. Comparison of the qualities and performance of the proposed substitution with that specified.

ii. Changes required in other elements of the work because of the substitution.

iii. Effect on the construction schedule.

iv. Cost data comparing the proposed substitution with the product specified.

v. Any required license fees or royalties.

vi. Availability of maintenance services, and source of replacement materials.

f. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.

g. The ENGINEER will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the ENGINEER's decision shall be final.

h. The ENGINEER may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute.

i. The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

j. Acceptance by the ENGINEER of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.

k. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR work, the work of its Subcontractors and of other Contractors, and shall effect such changes without cost to the OWNER.

E. Contractors Representation:

a. A request for a substitution constitutes a representation that CONTRACTOR:

i. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.

ii. Will provide the same guarantees or bonds for the substitution as for the product specified.

iii. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.

iv. Waives all claims for additional costs, under CONTRACTOR'S responsibility, which may subsequently become apparent.

F. Submittal Procedures

a. Submit three (3) copies of request for substitution.

b. ENGINEER will review requests for substitutions with reasonable promptness, and notify CONTRACTOR, in writing, of the decision to accept or reject the requested substitution.

c. During the bidding period, ENGINEER will record acceptable substitutions in Addenda.

d. After award of Contract, ENGINEER will notify CONTRACTOR, in writing, of decision to accept or reject requested substitutions in Addenda.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01710 – CLEANING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Execute cleaning, during progress of the Work, and at completion of the Work, as required by the General Conditions.

1.2 RELATED REQUIREMENTS

A. All applicable sections of the Specifications.

B. Conditions of the Contract.

1.3 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 PRODUCTS

2.1 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by cleaning material manufacturer.

PART 3 EXECUTION

3.1 DURING CONSTRUCTION

A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulation of waste material, rubbish and windblown debris, resulting from Construction Work.

B. Provide on-site containers for the collection of waste materials, debris and rubbish.

C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

C. The OWNER's Representative reserves the right to direct the CONTRACTOR to remove waste materials

D. Mechanical Sweeping. CONTRACTOR shall maintain on site a mechanical sweeping device for removing debris from existing, temporary and permanent pavement.

3.2 DUST CONTROL

A. Perform operations so that dust and other contaminants resulting from Construction Work operations will not cause any damages or maintenance problems to adjacent properties.

B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.3 FINAL CLEANING

A. Employ skilled workmen for final cleaning.

B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

C. Polish glossy surfaces to a clear shine.

D. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.

E. Prior to final completion, or OWNER occupancy, CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify the entire work is clean.

F. All storage and staging areas shall be cleaned and returned to prior conditions or better as per requirements of this section.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION

SECTION 01720 – PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General a n d Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

a. Record Drawings.

b. Record Specifications.

c. Record Product Data.

1.3 SUBMITTALS

A. Record Drawings. Comply with the following:

a. Number of Copies. Submit one set of marked-up Record Prints.

B. Record Specifications. Submit one copy of Project's Specifications, including addenda and contract modifications.

C. Record Product Data. Submit one copy of each Product Data submittal.

a. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints. Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.

a. Preparation. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

i. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.

ii. Accurately record information in an understandable drawing technique.

iii. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

a. Document with photographs.

b. Content. Types of items requiring marking include, but are not limited to, the following:

i. Dimensional changes to Drawings.

ii. Revisions to details shown on Drawings.

iii. Depths of foundations.

iv. Locations and depths of underground utilities.

v. Revisions to routing of piping and conduits.

vi. Revisions to electrical circuitry.

vii. Actual equipment locations.

viii. Changes made by Change Order or Work Change Directive.

ix. Changes made following Engineer's written orders.

x. Details not on the original Contract Drawings.

xi. Field records for variable and concealed conditions.

xii. Record information on the Work that is shown only schematically.

c. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.

d. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.

e. Mark important additional information that was either shown schematically or omitted from original Drawings.

f. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

g. Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Engineer. Make corrections where required.

B. Format. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

a. Record Prints. Organize Record Prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.

b. Identification. As follows:

i. Project number.

ii. Project name.

iii. Date.

iv. Designation "PROJECT RECORD DRAWINGS."

v. Name of Contractor.

2.2 RECORD SPECIFICATIONS

A. Preparation. Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

a. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

b. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

c. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

d. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.

e. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

A. Preparation. Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

a. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

b. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording. Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

B. Maintenance of Record Documents and Samples. Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.

C. Record Documents of water, sewer and drainage must be provided for the General Contractor by a Professional Land Surveyor and must be satisfactory for approval by the OWNER and shall comply with the latest approved version of the CADD City Standards.

D. Final pay request will not be processed until Record Documents have been completed and submitted to the City.

END OF SECTION

SECTION 01780 CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SUBMITTALS

A. Informational Submittals:

a. Submit prior to application for final payment.

i. Record Documents.

ii. As-built drawings (signed and sealed hardcopies and electronic format – PDF and CAD files)

iii. Special Bonds, Special Guarantees, and Service Agreements.

iv. Consent of Surety to Final Payment.

v. Releases or Waivers of Liens and Claims.

vi. Releases from Agreements.

vii. Final Application for Payment: Submit in accordance with procedures and requirements stated in Section 01025, Measurement and Payment.

viii. Spare Parts, Special Tools and Extra Materials: As required by individual Specification sections.

B. Subcontractor Identification Form:

a. Submit form with final pay request.

b. Submit a separate form for each subcontractor used.

c. For Capital Improvement Projects, submit form along with final pay request to the PCM.

d. Form is attached as a Supplement to this Section.

1.2 RECORD DOCUMENTS

A. Quality Assurance:

a. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.

b. Accuracy of Records:

i. Coordinate changes within record documents, making legible and accurate entries on each sheet of Drawings and other documents where such entry is required to show change.

ii. Purpose of Project record documents is to document factual information regarding aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.

c. Make entries within 24 hours after receipt of information that a change in the Work has occurred.

d. Prior to submitting each request for progress payment, request PCM's review and approval of current status of record documents. Failure to properly maintain, update, and submit record documents may result in a deferral by PCM to recommend whole or any part of Contractor's Application for Payment, either partial or final.

1.3 RELEASES FROM AGREEMENTS

A. Furnish Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's construction right-of-way.

B. In the Event Contractor is Unable to Secure Written Releases:

a. Inform PCM of the reasons.

b. Owner or its representatives will examine the site, and Owner will direct Contractor to complete the Work that may be necessary to satisfy terms of the side agreement or special easement.

c. Should Contractor refuse to perform this Work, Owner reserves right to have it done by separate contract and deduct cost of same from Contract Price, or require Contractor to furnish a satisfactory Bond in a sum to cover legal claims for damages.

d. When Owner is satisfied that the Work has been completed in agreement with Contract Documents and terms of side agreement or special easement, right is reserved to waive requirement for written release if:

i. Contractor's failure to obtain such statement is due to grantor's refusal to sign, and this refusal is not based upon any legitimate claims that Contractor has failed to fulfill terms of side agreement or special easement, or

ii. Contractor is unable to contact or has had undue hardship in contacting grantor.

1.4 AS-BUILT DRAWINGS

A. Quality Assurance

a. As-built drawings must meet all minimum City of Fort Lauderdale CAD standards and be submitted in the latest version of AutoCAD available at the time the contract is signed.

b. As-built drawings will be submitted in both electronic and hard copy forms as follow:

i. 3 hard copy sets of as-builts will be submitted on 24x36 paper signed, sealed, and dated by a Florida Professional Licensed Surveyor (PLS).

ii. 1 CD or jump drive which will include both DWG files for the package and a PDF document including the surveyor's signature and seal.

c. As-built drawings will include the following:

i. PLS name, business name, license numbers, address, and telephone number

ii. The following statement must be included:

"I hereby certify that the as-built location information of the potable water, reclaimed water, wastewater and drainage facilities shown on these drawings conforms to the minimum technical standards for land surveying in the State of Florida, Chapter 5J-17.050(10)(i) (Florida Administrative Code), as adopted by the Department of Agriculture and Consumer Services, Board of Professional Surveyors and Mappers, and that said as-builts are true and correct to the best of our knowledge and belief."

iii. As-built drawings will contain the information on the design drawings (plan and profile views) plus document changes between the design and construction including correcting all information that is incorrect due to changes during construction. Incorrect or no longer relevant information will be erased or struck through. All location changes constructed materially different (one- tenth foot horizontal, one tenth vertical) than the design location will have their design location struck through and will be redrafted at the constructed location. Design drawing dimensioning will be corrected as necessary.

iv. Drawing will be a complete set including cover sheet, index, and any other sheets included in the approved design set. Standard detail sheets are not necessary.

B. Minimum As-Built Drawing Requirements (Not applicable for this project)

a. Show the location of easements used by the water and wastewater facilities.

b. Indicate pipe joint locations where water and wastewater or reclaimed water piping crosses.

c. Indicated the length of gravity wastewater piping and actual slope between manhole centers.

d. Show all abandoned in place facilities including the extent and method of abandonment.

e. Show elevations to the nearest tenth of a foot for top of pipe for water mains, force mains, and reclaimed water mains at vertical deflection points, all bends, valves and fittings and every 200 feet along straight runs and where they cross all other facilities.

f. Show elevations to the nearest one hundredth of a foot for manhole rims, gravity main inverts at the manhole, force main connections to manholes, lift station top of slab, bottom of wet well, influent pipe invert and control set points.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 MAINTENANCE OF RECORD DOCUMENTS

A. General:

a. Promptly following commencement of Contract Times, secure from Engineer, at no cost to Contractor, one complete set of Contract Documents. Drawings will be full size.

b. Delete Engineer title block and seal from all documents.

c. Label or stamp each record document with title, “RECORD DOCUMENTS,” in neat large printed letters.

d. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded. Contractor is responsible for maintaining up-to-date “red-lined” markups, on site, of all changes including revised locations of buried features and provides access to the City for review at any time.

e. All piping inserts, fittings, and valve locations shall be located by a Florida

Licensed Surveyor in accordance with City of Fort Lauderdal surveying standards and per NAVD 88. Contractor shall provide adequate notice to the surveyor to ensure that all locations are accessible, prior to backfill.

B. Preservation:

a. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

b. Make documents and Samples available at all times for observation by PCM or Engineer.

C. Making Entries on Drawings:

a. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.

i. Color Coding:

a. Green when showing information deleted from Drawings.

b. Red when showing information added to Drawings.

c. Blue and circled in blue to show notes.

b. Date entries.

c. Call attention to entry by “cloud” drawn around area or areas affected.

d. Legibly mark to record actual changes made during construction, including, but not limited to:

i. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.

ii. Horizontal and vertical locations of existing and new Underground Facilities and appurtenances, and other underground structures, equipment, or Work. Reference to at least two measurements to permanent surface improvements.

iii. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.

iv. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.

v. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, Written Amendment, and Engineer's

written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.

e. Dimensions on Schematic Layouts: Show on record drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.

i. Clearly identify the item by accurate notes such as “cast iron drain,” “galv. water,” and the like.

ii. Show, by symbol or note, vertical location of item (“under slab,” “in ceiling plenum,” “exposed,” and the like).

iii. Make identification so descriptive that it may be related reliably to Specifications.

D. Coordination with Florida Licensed surveyor:

a. Contractor shall not cover any bends, valves, or fittings installed until they have been located by the survey crews for the purpose of preparing as-built and/or Record Drawings.

b. If the above conditions are not met, for any reason, Contractor shall bear the cost of potholing the constructed installation to allow for the locations.

3.2 FINAL CLEANING

A. At completion of the Work or of a part thereof and immediately prior to Contractor's request for certificate of Substantial Completion; or if no certificate is issued, immediately prior to Contractor's notice of completion, clean entire site or parts thereof, as applicable.

a. Leave the Work and adjacent areas affected in a cleaned condition satisfactory to Owner and PCM.

b. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces.

c. Repair, patch, and touch up marred surfaces to specified finish and match adjacent surfaces.

d. Clean all windows.

e. Clean and wax wood, vinyl, or painted floors.

f. Broom clean exterior paved driveways and parking areas.

g. Hose clean sidewalks, loading areas, and others contiguous with principal structures.

h. Rake clean all other surfaces.

i. Replace air-handling filters and clean ducts, blowers, and coils of ventilation units operated during construction.

j. Leave water courses, gutters, and ditches open and clean.

B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.

C. Meet all requirements of Section 02575, Surface Restoration.

3.3 SUPPLEMENTS

A. The supplements listed below, following “END OF SECTION,” are part of this Specification.

a. Subcontractor Identification Form (See next page).

END OF SECTION

DIVISION 2 – SITE CONSTRUCTION

SECTION 02100 – SITE PREPARATION

PART 1 GENERAL

1.1 DEFINITIONS

A. Interfering or Objectionable Material: Trash, rubbish, and junk; vegetation and other organic matter, whether alive, dead, or decaying; topsoil.

B. Clearing. Removal of interfering or objectionable material lying on or protruding above ground surface.

C. Grubbing. Removal of vegetation and other organic matter including stumps, buried logs, and roots greater than 2 inches caliper to a depth of 12 inches below subgrade.

D. Scalping. Removal of sod without removing more than upper 3 inches of topsoil.

E. Stripping. Removal of topsoil remaining after applicable scalping is completed.

F. Project Limits Areas, as specified, within which Work is to be performed.

1.2 QUALITY ASSURANCE

A. Obtain CONSULTANT's approval of staked clearing, grubbing, and stripping limits, prior to commencing clearing, grubbing, and stripping.

1.3 SCHEDULING AND SEQUENCING

A. Prepare site only after adequate erosion and sediment controls are in place. Limit areas exposed uncontrolled to erosion during installation of temporary erosion and sediment controls.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL

A. Clear, grubs, and strip areas actually needed for waste disposal, borrow, or site improvements within limits specified.

B. Property obstructions which are to remain in-place, such as buildings, sewers, drains, water or gas pipes, bridges, etc., are to be carefully protected from damage.

C. Do not injure or deface vegetation that is not designated for removal. All branches potentially interfering with construction operations shall be pruned prior to starting work and following approval of the CITY PROJECT MANAGER and the City of Fort

Lauderdale Urban Forester.

3.2 LIMITS

A. As Follows, but not to Extend beyond Project Limits.

a. Excavation Including Trenches.

i. 5 feet beyond top of cut slopes or shored wall.

b. Fill.

i. Clearing and Grubbing. 5 feet beyond toe of permanent fill.

ii. Stripping and Scalping. 2 feet beyond toe of permanent fill.

c. Waste Disposal.

i. Clearing: 5 feet beyond perimeter.

ii. Scalping and Stripping: Not required.

iii. Grubbing: Around perimeter as necessary for neat finished appearance.

d. Overhead Utilities.

i. Clearing, Grubbing Scalping, and Stripping: Wherever grading is required, including borrow pits, ditches, etc.

e. Other Areas. As shown.

B. Remove rubbish, trash, and junk from entire area within Project limits.

3.3 TEMPORARY REMOVAL OF INTERFERING PLANTINGS

A. Remove and store, as specified in the Contract Documents, Trees, Plants, and Ground Covers, shrubs and trees that are not designated for removal but do interfere with construction or could be damaged by construction activities.

B. Photograph and document location, orientation, and condition of each plant prior to its removal. Record sufficient information to uniquely identify each plant removed and to assure accurate replacement.

3.4 CLEARING

A. Clear areas within limits specified.

B. Fell trees so that they fall away from facilities and vegetation not designated for removal.

C. Cut stumps not designated for grubbing 12 inches below the ground surface.

D. Cut off shrubs, brush, weeds, and grasses to within 2 inches of ground surface.

3.5 GRUBBING

A. Grub areas within limits specified.

3.6 SCALPING

A. Do not remove sod until after clearing and grubbing is completed and resulting debris is removed.

B. Scalp areas within limits specified.

3.7 STRIPPING

A. Do not remove topsoil until after scalping is completed.

B. Strip areas within limits to minimum depths specified. Do not remove subsoil with topsoil.

C. Stockpile stripping, meeting requirements of Section 02911, Soil Preparation, for topsoil, separately from other excavated material.

3.8 TREE REMOVAL OUTSIDE CLEARING LIMITS

A. Remove Within Project Limits:

a. Dead, dying, leaning, or otherwise unsound trees that may strike and damage Project facilities in falling.

b. Trees designated by CONSULTANT.

B. Cut stumps off flush with ground, remove debris, and if disturbed, restore surrounding area to its original condition.

3.9 TREE TOPPING

A. Top trees designated by CITY PROJECT MANAGER so remaining portion will not strike facilities in falling. Where topping will remove more than 1/2 of a tree's crown, remove entire tree.

B. Treat wounds resulting from topping in accordance with standard horticultural practice to preserve the natural character of the tree.

3.10 PRUNING

A. Remove branches below the following heights:

a. Sixteen feet above roadways and shoulders.

b. Nine feet above sidewalks.

c. Six feet above roofs.

B. Prune only after planting and in accordance with standard horticultural practice to preserve the natural character of the plant. Perform in presence of the CONSULTANT. Remove all dead wood, suckers, and broken or badly bruised branches. Use only clean, sharp tools. Do not cut lead shoot.

3.11 DISPOSAL

A. Clearing and Grubbing Debris:

a. Woody debris may be chipped. Chips may be sold to Contractor's benefit or used for landscaping onsite as mulch or uniformly mixed with topsoil, provided that resulting mix will be fertile and not support combustion. Maximum dimensions of chipped material used onsite shall be 1/4-inch by 2 inch**.** Dispose of chips that are unsaleable or unsuitable for landscaping or other uses with unchipped debris.

b. Limit offsite disposal of clearing and grubbing debris to locations that are approved by federal, state, and local authorities, and that will not be visible from Project.

B. Scalping: As specified for clearing and grubbing debris.

C. Stripping:

a. Dispose of stripping that are unsuitable for topsoil or that exceed quantity required for topsoil offsite or in waste disposal areas approved by CONSULTANT.

b. Stockpile topsoil in sufficient quantity to meet Project needs. Dispose of excess stripping as specified for clearing and grubbing.

END OF SECTION

SECTION 02110 – CLEARING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section.

1.02 WORK INCLUDED

A. Provide all labor, materials, necessary equipment, and services to complete the clearing work, as indicated on the drawings, as specified herein or both.

B. Under this section, the CONTRACTOR shall do all clearing, grubbing, root-raking, and necessary clean-up operations in connection with the construction of the work and its related site work.

C. The work shall consist of the removal and disposal of plants, shrubs, hedges, stumps, roots, limbs, brush, fences, asphalt, etc. from all project areas as designated on the drawings and specified herein, and as directed by the ENGINEER on the site.

D. The CONTRACTOR shall remove all refuse, asphalt pavement, concrete pavement, glass, metal, stone, plaster, lumber, paper materials, and any and all trash found in clearing project area and in adjacent areas as directed by the ENGINEER.

E. The CONTRACTOR shall furnish all services, labor, transportation, materials, and equipment necessary for the performance of these operations. All clearing and cleanup operations shall be accomplished to the complete satisfaction of the ENGINEER.

1.03 RELATED WORK

A. Section 02200 – Earthwork

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.01 TREE REMOVAL AND TREE PRESERVATION

A. No trees shall be removed if located outside of the right-of-way and dedicated easement.

B. Within the rights-of-way and easements, no trees shall be removed without the approval of the CITY. Trees shall be evaluated on an individual basis in accordance with following:

a. Type and size of tree.
b. Proximity to proposed and/or existing utility lines and/or exfiltration trench.

c. Change in adjacent grades for swale excavation.
d. Proximity to proposed sidewalk.
e. Proximity to proposed edge of roadway.
f. Living condition of the tree.

C. If trees are determined to remain, Biobarrier shall be installed in accordance with the Biobarrier detail as shown on the Landscape Plans.

3.02 MEASUREMENT AND PAYMENT

A. Measurement and payment for this item will be made per square yard per Section 02210.

END OF SECTION

SECTION 02150 – DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1-General Requirements shall govern the WORK under this section

1.02 WORK INCLUDED

A. Provide all labor, materials, necessary equipment, and services to complete the site demolition work, as indicated on the drawings, as specified herein or both.

1.03 RELATED WORK

A. Section 02200 – Earthwork

1.04 QUALITY ASSURANCE

A. CONTRACTOR Qualifications: Minimum of five years of experience in demolition of comparable nature.

B. Requirements of All Applicable Regulatory Agencies:

All applicable Building Codes and other Public Agencies having jurisdiction upon the work.

1.05 SUBMITTALS

A. Permits and notices authorizing building demolition.

B. Certificates of severance of utility services.

C. Permit for transport and disposal of debris.

D. Demolition procedures and operational sequence for review and acceptance by ENGINEER.

1.06 JOB CONDITIONS

A. Existing Conditions

1. The demolition work shall be done as indicated on the construction plans.

2. Remove all demolition debris from the site the same day the work is performed. Leave no deposits of demolished material on site overnight.

3. Structural demolition, excavation, backfill and compaction as indicated in

drawings.

B. Protection:

1. Erect barriers, fences, guardrails, enclosures, and shoring to protect personnel, structures, and utilities remaining intact.

2. Protect designated trees and plants from damages.

3. Use all means necessary to protect existing objects and vegetation designated to remain, and, in the event of damage, immediately make all repairs, replacements and dressings to damaged plants necessary to the approval of the ENGINEER at no additional cost to the OWNER.

C. Maintaining Traffic:

1. Ensure minimum interference with roads, streets, driveways, sidewalks, and adjacent facilities.

2. Do not close or obstruct streets and sidewalks without written approval from the ENGINEER.

3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.

D. Dust Control:

1. Use all means necessary for preventing dust from demolition operations from being a nuisance to adjacent property owners. Methods used for dust control are subject to approval by the ENGINEER prior to use.

E. Burning:

1. On-site burning will not be permitted.

1.07 GENERAL ITEMS

A. Scope of work shall comprise the following: Provide all labor, materials, necessary equipment, and services to complete the demolition and clearing work, as indicated on the contract plans, and as specified herein.

B. The CONTRACTOR shall provide references to the OWNER to demonstrate that they are well versed in demolition of a comparable nature. Current occupational licenses held by CONTRACTOR shall be submitted to OWNER.

C. The CONTRACTOR shall be responsible for adherence to all applicable codes of all regulatory agencies having jurisdiction upon the works.

1.08 PRE-DEMOLITION MEETING

A. A meeting shall be held with the OWNER or OWNER's representative at the jobsite to describe intended demolition and cleaning procedures and schedules. This shall include identifying access routes for bringing necessary equipment in, removing debris from site, and designation of any trees, drives or other items to remain.

1.09 EXISTING CONDITIONS

A. The CONTRACTOR shall become thoroughly familiar with the site, and of existing utilities and their connections, and note all conditions, which may influence the work.

B. By submitting a bid, the CONTRACTOR affirms that CONTRACTOR has carefully examined the site and all conditions affecting work. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.

PART 2 - PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.01 INSPECTION

A. Contractor shall verify that structures to be demolished are discontinued in use and ready for removal.

B. Contractor shall not commence work until all conditions and requirements of all applicable public agencies are complied with.

3.02 PREPARATION

A. Arrange for, and verify termination of utility services to include removing meters and capping lines.

B. Notification:

Notify the OWNER at least three full working days prior to commencing the work of this Section.

A. The drawings do not purport to show all objects existing on the site; at the pre-demolition meeting before commencement of the work, verify with the OWNER all objects to be removed and all objects to be preserved.

3.03 CLARIFICATION

A. The drawings do not purport to show all objects existing on the site.

B. Before commencing the work of this Section, verify with the OWNER all objects to be removed and all objects to be preserved.

3.04 SCHEDULING

A. Schedule all work in a careful manner with all necessary consideration for the public and the OWNER.

B. Avoid interference with the use of, and passage to and from, adjacent facilities.

3.05 DISCONNECTION OF UTILITIES

A. Before starting site operations, disconnect or arrange for the disconnection of all affected utility service.

1. Arrange and pay for disconnecting, removing, capping, and plugging utility services. Disconnect and stub off. Notify affected utility company in advance and obtain approval before starting this work.

2. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction.

3. Place markers to indicate location of disconnected services.

4. On-site drainage structures and drain fields shall be removed in their entirety by methods approved by the OWNER's representative.

3.06 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. Utility Services: Maintain existing offsite utilities, keep in service, and protect against damage during demolition operations.

B. Prevent movement or settlement of adjacent structures. Provide and place bracing or shoring and be responsible for safety and support of structures. Assume liability for such movement, settlement, damage, or injury.

C. Cease operations and notify OWNER immediately if safety of adjacent structures appears to be endangered. Take precautions to properly support structures. Do not resume operations until safety is restored.

D. Prevent movement, settlement, damage, or collapse of adjacent services, sidewalks, driveways, and trees. Assume liability for such movement, settlement, or collapse. Promptly repair damage at no cost to the OWNER.

3.07 Ensure safe passage of persons around areas of demolition.

3.08 MAINTAINING TRAFFIC

A. Do not interfere with use of adjacent buildings and facilities. Maintain free and safe passage to and from. Conduct demolition operations and removal of debris to ensure minimum

interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed travel ways if required by governing authorities.

3.09 POLLUTION CONTROLS

A. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

B. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations as directed by the OWNER or their representative or governing authorities. Return adjacent areas to condition existing prior to start of work.

3.10 DEMOLITION

A. Pull out any existing utility lines designated for abandonment, electrical lines, pull boxes and splice boxes, Maintenance Access Structure (MAS) and catch basins to be removed and all other objects designated to be removed or interfering with the work. Contact the utility company or agency involved for their requirements for performing this work. All removed equipment and materials shall be removed from the work area the same day as removed.

B. Remove all debris from the site and leave the site in a neat, orderly condition to the full acceptance of the ENGINEER, or the OWNER. No debris shall be left on the site overnight.

C. Clear and Grub and dispose of all hedges, shrubs and other organic matter not otherwise addressed on tree removal and relocation plans and specifications.

3.10 DEMOLITION OF SITE STRUCTURES

A. Demolish all site structure items designated to be removed or which are required to be removed to perform the work. This item does not include buildings.

B. Duties include, but are not limited to the following:

1. Make all required agency notifications, secure permits, prepare work plans, plans and specifications.

2. Submit required agency notifications.

3. Approval of Abatement CONTRACTOR’s pre-job and post-job submittals.

3.12 REMOVAL OF DEBRIS AND DISPOSAL OF MATERIAL

A. Material resulting from demolition and not scheduled for salvaging shall become the property of the CONTRACTOR and shall be removed from site and legally disposed of off-

site. Disposal shall be timely, performed as promptly as possible and not left until the final cleanup. Material shall not be left on the job site for more than 60 days.

B. Remove from site contaminated, vermin infested, or dangerous materials encountered and disposed of by safe means so as not to endanger health of workers and public.

C. Burning of removed materials from demolished structures will not be permitted on-site.

3.12 COMPLETION OF WORK

A. Leave the site in a neat, orderly condition to the full acceptance of the OWNER.

B. Dirt remaining after demolition shall be graded level and compacted, in preparation for filling operations to follow demolition. Trenches shall be filled in layers of 12-inch maximum thickness and compacted in accordance with the technical specifications applicable to backfilling of trenches.

3.13 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section. It shall be included in the lump sum price bid for items associated with the demolition.

END OF SECTION

SECTION 02200 - EARTHWORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

A. Provide all labor, materials, necessary equipment, and services to complete the Earthwork, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

B. Including but not necessarily limited to the following:

1. Excavation, including demucking
2. Backfilling
3. Filling
4. Grading, general site and building pads
5. Compaction

C. There shall be no classification of excavation for measurement of payment regardless of materials encountered.

D. The work of this Section includes all earthwork required for construction of the WORK. Such earthwork shall include, but not be limited to, the loosening, removing, loading, transporting, depositing, and compacting in its final location of all materials wet and dry, as required for the purposes of completing the work specified in the Contract Documents, which shall include, but not be limited to, the furnishing, placing, and removing of sheeting and bracing necessary to safely support the sides of all excavation; all pumping, ditching, draining, and other required measures for the removal or exclusion of water from the excavation; the supporting of structures above and below the ground; all backfilling around structures and all backfilling of trenches and pits; the disposal of excess excavated materials; borrow of materials to makeup deficiencies for fills; and all other incidental earthwork, all in accordance with the requirement of the Contract Documents.

1.03 RELATED WORK

A. Section 02210 - Site Grading.

B. All applicable sections of Division 1, 2, 3, and 4.

1.04 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Codes: All codes, as referenced herein, are specified in Section 01090, "Reference Standards".

B. Commercial Standards:

ASTM D 422	Method for Particle-Size Analysis of Soils.
ASTM D 698	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb (2.49-kg) Rammer and 12-in (304.8-mm) Drop.
ASTM D 1556	Test Method for Density of Soil in Place by the Sand Cone Method.
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in (457-mm) Drop.
ASTM D 1633	Test Method for Compressive Strength of Molded Soil-Cement Cylinders.
ASTM D 2419	Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
ASTM D 2487	Classification of Soils for Engineering Purposes.
ASTM D 2901	Test Method for Cement Content of Freshly Mixed Soil-Cement.
ASTM D 2922	Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
ASTM D 4253	Test Methods for Maximum Index Density of Soils Using a Vibratory Table.
ASTM D 4254	Test Methods for Minimum Index Density of Soils and Calculation of Relative Density.

1.05 SUBSOIL INFORMATION

A. There are no representations of any type made as to sub-surface conditions.

1.06 SITE INSPECTION

A. CONTRACTOR shall visit the site and acquaint with all existing conditions. CONTRACTOR shall investigate the site and sub-surface conditions with no cost to the OWNER if CONTRACTOR chooses to. Such sub-surface investigations shall be performed only under time schedules and arrangements approved in advance by the OWNER's Representative and ENGINEER

1.07 TOPOGRAPHIC INFORMATION

A. The existing grades shown on the drawings are approximate only and no representation is made as to their accuracy or consistency. The CONTRACTOR shall verify all existing grades to the extent necessary to ensure completion of the job to the proposed grades indicated on the drawings.

1.08 DISPOSAL OF SURPLUS OR UNSUITABLE MATERIAL

A. Unsuitable material encountered during the course of construction shall be removed from the construction site at the expense of the CONTRACTOR. Unsuitable material shall not be stockpiled on-site. All suitable material shall be stockpiled on-site.

1.09 BENCH MARKS AND MONUMENTS

A. CONTRACTOR shall employ a registered surveyor to lay out lines and grades as indicated. A surveyor registered in the State of Florida shall establish benchmarks. Benchmarks shall be permanent and easily accessible and maintained and replaced if disturbed or destroyed. All benchmarks shall be NAVD 88.

1.10 UTILITIES

A. Before starting site operations, disconnect or arrange for the disconnection of all utility services designated to be removed.

B. Locate all existing active utility lines traversing the site and determine the requirements for their protection. Preserve in operating condition all active utilities adjacent to or traversing the site which are designated to remain.

C. Observe rules and regulations governing respective utilities when working under requirements of this section. Adequately protect utilities from damage, remove or replace as indicated, specified, or required. Remove, plug or cap inactive or abandoned utilities encountered in excavation. Record the location of all utilities.

1.11 QUALITY ASSURANCE

A. A SOILS ENGINEER may be retained by the OWNER to observe performance of work in connection with excavating, filling, grading, and compaction. The CONTRACTOR shall re-adjust all work performed that does not meet technical or design requirements but make no deviations from the Contract Documents without specific and written acceptance of the ENGINEER.

B. Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with ASTM D 1557. Where cohesionless, free draining soil material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D 4253 and D 4254. Field density in-place tests will be performed in accordance with ASTM D 1556, ASTM D 2922, or by such other means acceptable to the ENGINEER.

C. In case the tests of the fill or backfill show non-compliance with the required density, the CONTRACTOR shall accomplish such remedy as may be required to ensure compliance. Subsequent testing to show compliance shall be by a testing laboratory selected by the OWNER and shall be at the CONTRACTOR's expense.

F. Particle size analysis of soils and aggregates will be performed using ASTM D 422.

G. Determination of sand equivalent value will be performed using ASTM D 2419.

H. Unified Soil Classification System: References in these specifications to soil classification types and standards are set forth in ASTM D 2487. The CONTRACTOR shall be bound by all applicable provisions of said ASTM D 2487 in the interpretation of soil classifications.

G. Requirements of all applicable building codes and other public agencies having jurisdiction upon the work.

PART 2 - PRODUCTS

2.01 SUITABLE FILL AND BACKFILL MATERIAL REQUIREMENTS

A. General: Fill, backfill, and embankment materials shall be suitable selected or processed clean, fine earth, rock, or sand, free from grass, roots, brush, or other vegetation.

B. Fill and backfill materials to be placed within 6 inches of any structure or pipe shall be free of rocks or unbroken masses of earth materials having a maximum dimension larger than 3 inches.

C. Suitable Materials: Soils not classified as unsuitable as defined in the Paragraph entitled, "Unsuitable Material" herein, are defined as suitable materials and may be used in fills, backfilling, and embankment construction subject to the specified limitations. In addition, when acceptable to the ENGINEER, some of the material listed as unsuitable may be used when thoroughly mixed with suitable material to form a stable composite.

D. Suitable materials may be obtained from on-site excavations, may be processed on-site materials, or may be imported. If imported materials are required to meet the requirements of this Section or to meet the quantity requirements of the project the CONTRACTOR shall provide the imported materials at no additional expense to the OWNER, unless a unit price item is included for imported materials in the bidding schedule.

E. The following types of suitable materials are designated and defined as follows:

1. Type A (one inch minus granular backfill): Crushed rock, gravel, or sand with 100 percent passing a 1-inch sieve and a sand equivalent value not less than 50.

2. Type B (one half inch minus granular backfill): Crushed rock, gravel, or sand with 100 percent passing a 1/2-inch sieve and a sand equivalent value not less than Type C (sand backfill): Sand with 100 percent passing a 3/8-inch sieve, at least 90 percent passing a number 4 sieve, and a sand equivalent value not less than 30.

3. Type D (coarse rock backfill): Crushed rock or gravel with 100 percent passing a

1-inch sieve and not more than 10 percent passing a Number 4 sieve.

4. Type E (pea gravel backfill): Crushed rock or gravel with 100 percent passing a 1/2-inch sieve and not more than 10 percent passing a Number 4 sieve.

5. Type F (coarse drainrock): Crushed rock or gravel meeting the following gradation requirements:

Sieve Size	Percentage Passing
2-inch	100
1-1/2-inch	90-100
1-inch	20-55
3/4-inch	0-15
No. 200	0-3

6. Type G (aggregate base): Crushed rock aggregate base material of such nature that it can be compacted readily by watering and rolling to form a firm, stable base for pavements. At the option of the CONTRACTOR, the grading for either the 1-1/2-inch maximum size or 3/4-inch maximum size shall be used. The sand equivalent value shall be not less than 22, and the material shall meet the following gradation requirements.

	Percentage Passing	
Sieve Size	1-1/2 inch Max.	3/4-inch Max.
2-inch	100	-
1-1/2 inch	90-100	-
1-inch	-	100
3/4-inch	50-85	90-100
No. 4	25-45	35-55
No. 30	10-25	10-30
No. 200	2-9	2-9

7. Type H (graded drainrock): Drainrock shall be crushed rock or gravel, durable and free from slaking or decomposition under the action of alternate wetting or drying. The material shall be uniformly graded and shall meet the following gradation requirements.

Sieve Size	Percentage Passing
1-inch	100
3/4-inch	90-100
3/8-inch	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

The drainrock shall have a sand equivalent value not less than 75. The finish-graded surface of the drainrock immediately beneath hydraulic structures shall be stabilized to provide a firm, smooth surface upon which to construct reinforced concrete floor slabs. The CONTRACTOR shall use, at its option, one of the asphalt

types listed below:

	Type 1	Type 2	Type 3
Designation	SC-70	SC-250	RS-1
Spray Temperature (°F)	135-175	165-200	70-120
Coverage (gal/ sq yd)	0.50	0.50	0.50

If the surface remains tacky, sufficient sand shall be applied to absorb the excess asphalt.

8. Type I: Any other suitable material as defined herein.

9. Type J (cement-treated backfill): Material which consists of Type H material, or any mixture of Types B, C, G and H materials which has been cement-treated so that the cement content of the material is not less than 5 percent by weight when tested in accordance with ASTM D 2901. The ultimate compressive strength at 28 days shall be not less than 400 psi when tested in accordance with ASTM D 1633.

10. Type K (topsoil): Stockpiled topsoil materials, which have been obtained at the site by removing soil to a depth not exceeding 2 feet. Removal of the topsoil shall be done after the area has been stripped of vegetation and debris as specified.

11. Type L (Class I crushed stone): Manufactured angular, granular crushed stone, rock, or slag, with 100 percent passing a 1-inch sieve and less than 5 percent passing a Number 4 sieve.

12. Type M (aggregate subbase): Crushed rock aggregate subbase material that can be compacted readily by watering and rolling to form a firm stable base. The sand equivalent value shall be not less than 18 and shall meet the following gradation requirements.

Sieve Size	Percentage Passing
3-inch	100
2-1/2 inch	87-100
No. 4	35-95
No. 200	0-29

13. Type N (trench plug): Low permeable fill material, a non dispersible clay material having a minimum plasticity index of 10.

2.02 UNSUITABLE MATERIAL

A. Unsuitable soils for fill material shall include soils which, when classified under ASTM D 2487, fall in the classifications of PT, OH, CH, MH or OL.

B. In addition, any soil, which cannot be compacted sufficiently to achieve the percentage of maximum density specified for the intended use, shall be classed as unsuitable material.

2.03 USE OF FILL, BACKFILL, AND EMBANKMENT MATERIAL TYPES

A. The CONTRACTOR shall use the types of materials as designated herein for all required fill, backfill, and embankment construction hereunder.

B. Where these Specifications conflict with the requirements of any local agency having jurisdiction, or with the requirements of a material manufacture, the ENGINEER shall be immediately notified. In case of conflict therewith, the CONTRACTOR shall use the most stringent requirement, as determined by the ENGINEER.

C. Fill and backfill types shall be used in accordance with the following provisions:

1. Embankment fills shall be constructed of Type I material, as defined herein, or any mixture of Type I and Type A through Type H materials.

2. Pipe zone backfill, as defined under "Pipe and Utility Trench Backfill" herein, shall consist of the following materials for each pipe material listed below. Where pipelines are installed on grades exceeding 4 percent, and where backfill materials are graded such that there is less than 10 percent passing a Number 4 sieve, trench plugs of Type J or N material shall be provided at maximum intervals of 200 feet or as shown on the Drawings.

   a. Mortar coated pipe, concrete pipe, and uncoated ductile iron pipe shall be provided Type A, B, C, D, E, or L pipe zone backfill material.

   b. Coal tar enamel coated pipe, polyethylene encased pipe, tape wrapped pipe, and other non-mortar coated pipe shall be backfilled with Type C pipe zone backfill material.

   c. Plastic pipe and vitrified clay pipe shall be backfilled with Type L pipe zone backfill material.

3. Trench zone backfill for pipelines as defined under "Pipe and Utility Trench Backfill" shall be Type I backfill material or any of Types A through H backfill materials or any mixture thereof, except that Type K material may be used for trench zone backfill in agricultural areas unless otherwise shown or specified.

4. Final backfill material for pipelines under paved area, as defined under "Pipe and Utility Trench Backfill" shall be Type G backfill material. Final backfill under areas not paved shall be the same material as that used for trench backfill, except that Type K material shall be used for final backfill in agricultural areas unless otherwise

shown or specified.

5. Trench backfill, and final backfill for pipelines under structures shall be the same material as used in the pipe zone, except where concrete encasement is required by the Contract Documents.

6. Aggregate base materials under pavements shall be Type G material constructed to the thickness shown or specified. Where specified or shown, aggregate subbase shall be Type M Material.

7. Backfill around structures shall be Type I material, or Types A through Type H materials, or any mixture thereof.

8. Backfill materials beneath structures shall be as follows:

   a. Drainrock materials under hydraulic structures or other water retaining structure with underdrain systems shall be Type H material.

   b. Under concrete hydraulic structures or other water retaining structures without underdrain systems, Types G or H materials shall be used.

   d. Under structures where groundwater must be removed to allow placement of concrete, Type F material shall be used.

   e. Under all other structures, Type D, E, G, or H material shall be used.

9. Backfill used to replace pipeline trench over-excavation shall be a layer of Type F material with a 6-inch top filter layer of Type E material or filter fabric to prevent migration of fines for wet trench conditions or the same material as used for the pipe zone backfill if the trench conditions are not wet. Filter fabric shall be Mirafi 140 N, Mirafi 700X, or approved equal.

10. The top 6 inches of fill on reservoir roofs, embankment fills around hydraulic structures, and all other embankment fills shall consist of Type K material, topsoil.

2.04 EMBANKMENT

A. The maximum sizes of rock, which will be permitted in the completed fill areas, are as follows:

Depth Below Finish Grade	Maximum Allowable Diameter
Top 4 inches	1 inch
4 inches to 12 inches	3-1/2 inches
12 inches to 2 feet	6 inches
2 feet to 4 feet	12 inches
4 feet to 8 feet	24 inches

Below 8 feet	36 inches

B. Embankments shall be constructed of material containing no muck, stumps, roots, brush, vegetable matter, rubbish or other material that will not compact into a suitable and enduring roadbed, and material designated as undesirable shall be removed from the site. Where embankments are constructed adjacent to bridge end bents or abutments, rock larger than 3-1/2 inches in diameter shall not be placed within three feet of the location of any abutment.

C. Fill material containing debris, sod, and biodegradable materials shall not be used as fill in construction areas.

D. Fill material required for the building pads and for pavement subgrade shall be granular fill, free of organic material.

E. Fill material required for pervious and sodded areas shall have a maximum organic component of 10%. CONTRACTOR shall provide, at CONTRACTOR'S cost, organic content test results for approval by the ENGINEER.

PART 3 - EXECUTION

3.01 JOB CONDITIONS

A. Protection: Use all means necessary to protect existing objects and vegetation. In the event of damage, immediately make all repairs, and replacements necessary to the acceptance of the OWNER's Representative and OWNER at no cost to the OWNER.

BACKFILL, FILLING & GRADING

A. Grades:

1. Cut, backfill, fill and grade to proper grade levels indicated. The existing grades shown on the drawings are to be matched for finished grade over the site.

B. Filling:

1. Fill material shall be placed in horizontal layers and spread to obtain a uniform thickness.

2. After compaction, layers of fill are not to exceed twelve (12) inches for cohesive soils or eight (8) inches for noncohesive soils.

3.03 STRUCTURE, ROADWAY, AND EMBANKMENT EXCAVATION

A. General: Except when specifically provided to the contrary, excavation shall include the removal of all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution and completion of the work. The removal of said materials shall conform to the lines and grades shown or ordered. Unless otherwise provided, the entire construction site shall be stripped of all vegetation and

debris, and such material shall be removed from the site prior to performing any excavation or placing any fill. The CONTRACTOR shall furnish, place, and maintain all supports and shoring that may be required for the sides of the excavations, and all pumping, ditching, or other measure for the removal or exclusion of water, including taking care of storm water, groundwater, and wastewater reaching the site of the work from any source so as to prevent damage to the work or adjoining property. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926).

B. Excavation Beneath Structures and Embankments: Except where otherwise specified for a particular structure or ordered by the ENGINEER, excavation shall be carried to the grade of the bottom of the footing or slab. Where shown or ordered, areas beneath structures or fills shall be over-excavated. The subgrade areas beneath embankments shall be excavated to remove not less than the top [6 inches] of native material and where such subgrade is sloped, the native material shall be benched. When such over excavation is shown, the CONTRACTOR shall perform both over-excavation and subsequent backfill to the required grade. When such over-excavation is not shown but is ordered by the ENGINEER, such over-excavation and any resulting backfill will be paid for under a separate unit price bid item if such bid item has been established; otherwise, payment will be made in accordance with a negotiated price. After the required excavation or over-excavation has been completed, the exposed surface shall be scarified to a depth of 6 inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain density as specified in Section 02200, Paragraph 3.14.I.

C. Excavation Beneath Paved Areas: Excavation under areas to be paved shall extend to the bottom of the aggregate base or subbase, if such base is called for; otherwise, it shall extend to the paving thickness. After the required excavation has been completed, the top 12 inches of exposed surface shall be scarified, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain density as specified in Section 02200, Paragraph 3.14.I. The finished subgrade shall be even, self-draining, and in conformance with the slope of the finished pavement. Areas that could accumulate standing water shall be regraded to provide a self-draining subgrade.

D. Notification of ENGINEER: The CONTRACTOR shall notify the ENGINEER at least 3 days in advance of completion of any structure excavation and shall allow the ENGINEER a review period of at least one day before the exposed foundation is scarified and compacted or is covered with backfill or with any construction materials.

3.04 PIPELINE AND UTILITY TRENCH EXCAVATION

A. General: Unless otherwise shown or ordered, excavation for pipelines and utilities shall be open-cut trenches. Trench widths shall be kept as narrow as is practical for the method of pipe zone densification selected by the CONTRACTOR but shall have a

minimum width at the bottom of the trench equal to the outside diameter of the pipe plus 24 inches for mechanical compaction methods and 18 inches for water consolidation methods. See Detail 180 for further detail as shown on the Drawings.

B. Trench Bottom: Except when pipe bedding is required, the bottom of the trench shall be excavated uniformly to the grade of the bottom of the pipe. The trench bottom shall be given a final trim, using a string line for establishing grade, such that each pipe section when first laid will be continually in contact with the ground along the extreme bottom of the pipe. Rounding out the trench to form a cradle for the pipe will not be required. Excavations for pipe bells and welding shall be made as required.

C. Open Trench: The maximum amount of open trench permitted in any one location shall be 300 feet, or the length necessary to accommodate the amount of pipe installed in a single day, whichever is greater. All trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day. The above requirements for backfilling or use of steel plate will be waived in cases where the trench is located further than 100 feet from any traveled roadway or occupied structure. In such cases, however, barricades and warning lights meeting OSHA requirements shall be provided and maintained.

4 Trench Over-Excavation: Where the Drawings indicate that trenches shall be over-excavated, they shall be excavated to the depth shown, and then backfilled to the grade of the bottom of the pipe.

E. Over-Excavation: When ordered by the ENGINEER, whether indicated on the Drawings or not, trenches shall be over-excavated beyond the depth shown. Such over- excavation shall be to the depth ordered. The trench shall then be backfilled to the grade of the bottom of the pipe. All work specified in this Section shall be performed by the CONTRACTOR when the over-excavation ordered by the ENGINEER is less than 6 inches below the limits shown. When the over-excavation ordered by the ENGINEER is
6 inches or greater below the limits shown, additional payment will be made to the CONTRACTOR for that portion of the work which is located below said 6-inch distance. Said additional payment will be made under separate unit price bid items for over-excavation and bedding if such bid items have been established; otherwise, payment will be made in accordance with a negotiated price.

F. Where pipelines are to be installed in embankment or structure fills, the fill shall be constructed to a level at least one foot above the top of the pipe before the trench is excavated.

OVER-EXCAVATION NOT ORDERED, SPECIFIED, OR SHOWN

A. Any over-excavation carried below the grade ordered, specified, or shown, shall be backfilled to the required grade with the specified material and compaction. The CONTRACTOR at its own expense shall perform such work.

3.06 EXCAVATION IN LAWN AREAS

A. Where excavation occurs in lawn areas, the sod shall be carefully removed, kept damp, and stockpiled to preserve it for replacement. Excavated material may be placed on the lawn, provided that a drop cloth or other suitable method is employed to protect the lawn from damage. The lawn shall not remain covered for more than 72 hours. Immediately after completion of backfilling and testing of the pipeline, the sod shall be replaced and lightly rolled in a manner so as to restore the lawn as near as possible to its original condition. CONTRACTOR shall provide new sod if stockpiled sod has not been replaced within 72 hours.

3.07 EXCAVATION IN VICINITY OF TREES

A. Except where trees are shown to be removed, trees shall be protected from injury during construction operations. No tree roots over 2 inches in diameter shall be cut without express permission of the ENGINEER. Trees shall be supported during excavation by any means previously reviewed and approved by the ENGINEER.

3.08 ROCK EXCAVATION

A. Rock is defined as follows:

1. Rock shall be classified as material having a blow count in excess of 30 blows per foot from a Standard Penetration Test (ASTM D-1586) and exceeding 1000 psi from an Unconfined Compression Strength Test (ASTM D-2938); and,

2. General Excavation - Any material that cannot be excavated with a single- toothed ripper drawn by a crawler tractor having a minimum draw bar pull rated at not less than 71,000 lbs. (Caterpillar D9N or equivalent), and occupying an original volume of at least 2 cubic yards or more; and,

3. Trench Excavation - Any material that cannot be excavated with a backhoe having a break out force rated at not less than 44,000 lbs. (Caterpillar 235D or equivalent), and occupying an original volume of at least 2 cubic yards.

B. Rock excavation shall include removal and disposal of the following: (1) all boulders measuring 1/3 of a cubic yard or more in volume; (2) all rock material in ledges, bedding deposits, and unstratified masses which cannot be removed without systematic drilling and blasting; (3) concrete or masonry structures which have been abandoned; and (4) conglomerate deposits which are so firmly cemented that they possess the characteristics of rock as described in Paragraph 3.09(A).

C. Said rock excavation shall be performed by the CONTRACTOR; provided, that should the quantity of rock excavation be affected by any change in the scope of the work, an appropriate adjustment of the contract price will be made under a separate bid item if such bid item has been established; otherwise, payment will be made in accordance with the negotiated price.

D. Explosives and Blasting: Blasting will not be permitted, except by express permission of the ENGINEER on a case-by-case basis. The use of explosives will be subject to the approval and regulations of all agencies having jurisdiction. If blasting is utilized at the site of the WORK, the CONTRACTOR shall take all precautions and provide all

protective measures necessary to prevent damage to property and structures or injury to person. Prior to blasting, the CONTRACTOR shall secure all permits required by law for blasting operations and shall provide any additional hazard insurance required by the OWNER. The CONTRACTOR shall have a fully qualified and experienced blasting construction supervisor in charge of all blasting operations.

E. The CONTRACTOR will be held responsible for all and shall make good any damage caused by blasting or resulting from its possession or use of explosives on the WORK.

F. All operations involving the handling, storage, and use of explosives shall be conducted in accordance with the requirements of the OSHA Standards for Construction, and in accordance with all local laws and regulations.

3.09 DISPOSAL OF EXCESS EXCAVATED MATERIAL

A. The CONTRACTOR shall remove and dispose of all excess excavated material at a site selected by the CONTRACTOR and reviewed by the ENGINEER.

3.10 DISPOSAL OF UNSUITABLE EXCAVATED MATERIAL

A. The CONTRACTOR shall remove and dispose of all unsuitable excavated material. This shall include muck, tree roots, rocks, garbage, debris, or any other material designated as unsuitable by Paragraph 2 of this Section. Disposal shall be at a site selected by the CONTRACTOR that is designated as an approved disposal site for the unsuitable material.

3.11 BACKFILL - GENERAL

A. Backfill shall not be dropped directly upon any structure or pipe. Backfill shall not be placed around or upon any structure until the concrete has attained sufficient strength to withstand the loads imposed. Backfill around water retaining structures shall not be placed until the structures have been tested, and the structures shall be full of water while backfill is being placed.

B. Except for drainrock materials being placed in over-excavated areas or trenches, backfill shall be placed after all water is removed from the excavation.

3.12 PLACING AND SPREADING OF BACKFILL MATERIALS

A. Backfill materials shall be placed and spread evenly in layers. When compaction is achieved using mechanical equipment the layers shall be evenly spread so that when compacted each layer shall not exceed 6 inches in thickness.

B. During spreading each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer. Pipe zone backfill materials shall be manually spread around the pipe so that when compacted the pipe zone backfill will provide uniform bearing and side support.

C. Where the backfill material moisture content is below the optimum moisture content water shall be added before or during spreading until the proper moisture content is achieved.

E. Where the backfill material moisture content is too high to permit the specified degree of compaction the material shall be dried until the moisture content is satisfactory.

3.13 COMPACTION - GENERAL

A. Compact each layer of fill in designated areas with approved equipment to achieve a maximum density at optimum moisture, AASHTO T 180 - latest edition.

1. Building Pads: compaction shall be to 98% of maximum density, unless otherwise shown on the drawings or specifications. Building pads shall be within plus or minus one-tenth (0.1) of a foot of the elevations shown on the plans.

2. Refer to Sections 02513 Asphaltic Concrete Paving - General and 02515 Portland Cement Concrete Paving for compaction requirements in the affected areas.

3. Under landscaped area, compaction shall be to density as specified in Section 02200, Paragraph 3.14.I. unless otherwise shown on the Drawings.

B. No backfill shall be placed against any masonry or other exposed building surface until permission has been given by the OWNER's Representative, and in no case until the masonry has been in place seven days.

C. Heavy construction equipment will not be permitted within ten (10) feet of any masonry or other exposed building surface.

D. Compaction in limited areas shall be obtained by the use of mechanical tampers or approved hand tampers. When hand tampers are used, the materials shall be deposited in layers not more than four inches thick. The hand tampers used shall be suitable for this purpose and shall have a face area of not more than 100 square inches. Special precautions shall be taken to prevent any wedging action against masonry, or other exposed building surfaces.

3.14 COMPACTION OF FILL, BACKFILL, AND EMBANKMENT MATERIALS

A. Each layer of Types, A, B, C, G, H, I, and K backfill materials as defined herein, where the material is graded such that at least 10 percent passes a No. 4 sieve, shall be mechanically compacted to the specified percentage of maximum density. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content.

B. Each layer of Type D, E, F, and J backfill materials shall be compacted by means of at least 2 passes from a flat plate vibratory compactor. When such materials are used for pipe zone backfill, vibratory compaction shall be used at the top of the pipe zone or at vertical intervals of 24 inches, whichever is the least distance from the subgrade.

C. Type L material requires mechanical spreading and placement to fill voids but does not require mechanical compaction or vibration.

D. Fill on reservoir and structure roofs shall be deposited at least 30 days after the concrete roof slab has been placed. Equipment weighing more than 10,000 pounds when loaded shall not be used on a roof. A roller weighing not more than 8,000 pounds shall be used to compact fill on a roof.

F. Flooding, ponding, or jetting shall not be used for filling on roofs, backfill around structures, backfill around reservoir walls, for final backfill materials, or aggregate base materials.

G. Pipe zone backfill materials that are granular may be compacted by a combination of flooding and vibration using concrete vibrators or by jetting, when acceptable to the ENGINEER.

G. Pipeline trench zone backfill materials, containing 5 percent or less of material passing a No. 200 sieve, may be compacted using flooding and jetting or vibration if the CONTRACTOR uses effective procedures that yield the specified compaction test results. Flooding and jetting shall not be done in such a manner that the pipe or nearby utilities are damaged, in areas of poorly draining or expansive soils, or where the use of the procedure is prohibited by any agency having jurisdiction over the street or right-of- way. Approved jet pipes or immersible vibrators shall be used so that each backfill layer is saturated and consolidated to its full depth before the next layer is placed. Jet pipes shall be kept at least 6 inches away from the pipe where the backfills being consolidated and 2 feet away from other pipes or utilities.

H. Equipment weighing more than 10,000 pounds shall not be used closer to walls than a horizontal distance equal to the fill at that time. Hand operated power compaction equipment shall be used where use of heavier equipment is impractical or restricted due to weight limitations.

I. Compaction Requirements: The following compaction test requirements shall be in accordance with AASHTO T-180. Where agency or utility company requirements govern, the highest compaction standards shall apply.

Location or Use of Fill	Percentage of Maximum Density
Pipe zone backfill portion above bedding for flexible pipe.	98
Pipe zone backfill bedding and over-excavated zones under bedding/pipe for flexible pipe, including trench plugs.	98
Pipe zone backfill portion above bedding for rigid pipe.	98
Pipe zone backfill bedding and over-	

excavated zones under bedding/pipe for rigid pipe.	98
Final backfill, beneath paved areas or structures	98
Final backfill, not beneath paved areas or structures	95
Trench zone backfill, not beneath paved areas or structures, including trench plugs	95
Embankments	98
Embankments, beneath paved areas or structures	98
Backfill beneath structures, hydraulic structures	98
Backfill around structures	98

Location or Use of Fill	Percentage of Maximum Density
Topsoil (Type K material)	80
Aggregate base or subbase Type G or M material)	98

Trench Backfill Requirements: the pipe has been structurally designed based upon the trench configuration specified herein.

K. The CONTRACTOR shall maintain the indicated trench cross section up to a horizontal plane lying 6 inches above the top of the pipe.

L. If, at any location under said horizontal plane, the CONTRACTOR slopes the trench walls or exceeds the maximum trench widths indicated in the Contract Documents, the pipe zone backfill shall be “improved” or the pipe class increased as specified herein, at no additional cost to the OWNER. “Improved” backfill shall mean sand-cement backfill or other equivalent materials acceptable to the ENGINEER.

M. If the allowable deflection specified for the pipe is exceeded, the CONTRACTOR shall expose and reground or replace the pipe, repair all damaged lining and coating, and reinstall the pipe zone material and trench backfill as specified at no additional expense to the OWNER.

3.15 PIPE AND UTILITY TRENCH BACKFILL

A. Pipe zone Backfill: The pipe zone is defined as that portion of the vertical trench cross-

section lying between a plane 6 inches below the bottom surface of the pipe, i.e., the trench subgrade, and a plane at a point 6 inches above the top surface of the pipe. The bedding for flexible pipe is defined as that portion of pipe zone backfill material between the trench subgrade and the bottom of the pipe. The bedding for rigid pipe is defined as that portion of the pipe zone backfill material between the trench subgrade and a level line which varies from the bottom of the pipe to the spring line as shown.

B. Bedding shall be provided for all sewers, drainage pipelines, and other gravity flow pipelines. Unless otherwise specified or shown, for other pipelines the bedding may be omitted if all the following conditions exist.

1. The pipe bears on firm, undisturbed native soil, which contains only particles that will pass a one-inch sieve.

2. The trench excavation is not through rock or stones.

3. The trench subgrade soils are classified as suitable fill and backfill materials per Paragraph 2.01.

4. The trench subgrade soils have, as a maximum, a moisture content that allows compaction.

C. Where bedding is required, after compacting the bedding the CONTRACTOR shall perform a final trim using a stringline for establishing grade, such that each pipe section when first laid will be continually in contact with the bedding along the extreme bottom of the pipe. Excavation for pipe bells and welding shall be made as required.

D. The pipe zone shall be backfilled with the specified backfill material. The CONTRACTOR shall exercise care to prevent damage to the pipeline coating, cathodic bonds, or the pipe itself during the installation and backfill operations.

E. Trench Zone Backfill: After the pipe zone backfill has been placed as specified above, and after all excess water has completely drained from the trench, backfilling of the trench zone may proceed. The trench zone is defined as that portion of the vertical trench cross-section lying between a plane 6 inches above the top surface of the pipe and a plane at a point 18 inches below the finished surface grade, or if the trench is under pavement, 18 inches below the roadway subgrade. If flooding, ponding, or jetting is used the pipe shall be filled with water to prevent flotation.

F. Final Backfill: Final backfill is all backfill in the trench cross-sectional area within 18 inches of finished grade, or if the trench is under pavement, all backfill within 18 inches of the roadway subgrade.

3.16 EMBANKMENT CONSTRUCTION

A. The area where an embankment is to be constructed shall be cleared of all vegetation, roots, and foreign material. Following this, the surface shall be moistened, scarified to a depth of 6 inches, and rolled or otherwise mechanically compacted as specified in Section 02200, Paragraph 3.14.I. Embankment fill material shall be placed and spread evenly in

horizontal layers. Each layer shall be moistened or aerated, as necessary. Unless otherwise approved by the ENGINEER, each layer shall not exceed 6 inches of compacted thickness. The embankment fill and the scarified layer of underlying ground shall be compacted to 95 percent of maximum density under structures and paved areas, and 90 percent of maximum density elsewhere.

B. When an embankment fill is to be made and compacted against hillsides or fill slopes steeper than 4:1, the slopes of hillsides or fills shall be horizontally benched to key the embankment fill to the underlying ground. A minimum of 12 inches normal to the slope of the hillside or fill shall be removed and recompacted as the embankment fill is brought up in layers. Material thus cut shall be recompacted along with the new fill material at the CONTRACTOR's expense. Hillside of fill slopes 4:1 or flatter shall be prepared in accordance with Paragraph A, above.

C. Where embankment or structure fills are constructed over pipelines, the first 4 feet of fill over the pipe shall be constructed using light placement and compaction equipment that does not damage the pipe. Heavy construction equipment shall maintain a minimum distance from the edge of the trench equal to the depth of the trench until at least 4 feet of fill over the pipe has been completed.

3.17 CORRECTION OF GRADE

A. Bring to required grade levels areas where settlement, erosion or other grade changes occur.

3.18 MAINTENANCE AND PROTECTION OF WORK

A. While construction is in progress adequate drainage for the roadbed shall be maintained at all times.

The CONTRACTOR shall maintain all earthwork construction throughout the life of the contract, unless otherwise provided, and shall take all reasonable precautions to prevent loss of material from the roadway due to the action of wind or water. CONTRACTOR shall repair at CONTRACTOR'S expense, except as otherwise provided herein, any slides, washouts, settlement, subsidence, or other mishap which may occur prior to final acceptance of the work.

All channels excavated as a part of the contract work shall be maintained against natural shoaling or other encroachments to the lines, grades, and cross sections shown on the plans, until final acceptance of the project.

3.19 AS-BUILT SURVEY

A. At the completion of the work and prior to final inspection of the area, the CONTRACTOR shall provide the ENGINEER with an as-built topographic survey made by a registered Surveyor, of the State of Florida.

B. The surveyor is to certify on the survey whether or not the as-built conditions conform to the elevations shown on the Drawings to within plus or minus two-hundredth (0.02) of a

foot.

3.20 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the unit price per square yard bid for compaction of subgrade when constructing new roads and shall be included in the cost of all other work called out in the bid schedule requiring earth work.

END OF SECTION 02200

SECTION 02210 – SITE GRADING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this section.

1.02 WORK INCLUDED

A. The work covered by this section shall include all labor, equipment, services, and materials necessary for bringing the entire site to elevations shown in the plans. The work included in this section shall include all necessary excavations for streets, ditches, and swales. It shall include the construction of embankments and fills by the loading, movement, deposition, and compaction of suitable fill materials resulting from above listed excavations. It shall include stockpiling of any excess material to an on-site location as specified by the OWNER.

B. It shall include rough grading within the roadways, driveways, swales and parking lots to the elevations or cross-section details shown on the drawings.

C. It shall include the erection and maintenance of any barricades that are required for accident prevention and property protection.

D. It shall include removal and legal disposal of muck, rock boulders or any foreign material interfering with construction.

1.03 RELATED WORK

A. Section 02110 - Clearing

B. Section 02200 - Earthwork

PART 2 PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 GENERAL

A. The CONTRACTOR shall be familiar with all work to be performed as specified and shown on the Drawings. CONTRACTOR shall ascertain where all excavation will be required and shall be solely responsible for all excavating to complete the Contract.

3.02 PAYMENT

A. No extra payment will be allowed for type or classification of material in excavation.

3.03 MATCHING EXISTING GRADES

A. Where existing roadbed surfaces are not at the elevation required prior to subgrade compaction, the CONTRACTOR shall perform any such excavation, filling, earthmoving and grading as may be necessary to attain the proper compacted subgrade elevation before proceeding with base course construction.

3.04 UNSUITABLE MATERIAL

A. All muck, large rocks and boulders encountered during the work under this Contract shall be removed and legally disposed of in a manner approved by the OWNER's Representative.

3.05 EXCAVATION

A. All excavation shall be unclassified regardless of material encountered.

B. The CONTRACTOR shall make probing or sounding for sub-surface rock to ascertain its location and depth.

C. It shall be the CONTRACTOR's responsibility to be familiar with soil conditions on the site. Soil boring information provided herein is to be used only for reference. Borings, in addition to those provided by others, if any, shall be acquired by the CONTRACTOR, at the CONTRACTOR's expense.

D. Any wet excavated materials shall be drained before hauling or moving.

3.06 EMBANKMENT (FILL)

A. Embankment shall be constructed from suitable materials resulting from roadway or site excavation or approved materials furnished from off-site borrow areas.

B. Embankments shall be placed in successive layers of not more than eight inches in thickness, measured loose, for the full width of the embankment.

C. Each layer of the material used in the formation of roadbed embankments shall be compacted at optimum moisture content to a density as specified in Section 02200, Paragraph 3.14.I.

D. The existing material on the site may vary as to stability. The CONTRACTOR shall be familiar with the soil characteristics by site inspection borings, probing, etc., prior to bidding, as to the sub-surface character of the material.

E. All unstable soil shall be removed and shall be replaced by material approved by the ENGINEER.

3.07 GRADING

A. The material excavated shall be transported and spread over the entire work site and shall be graded so that the finished grade shall be within ±0.1 feet of the grades

indicated by the grade stakes and control point elevations shown on the plans and by the cross-sections. Due to the minimal slope of the roadways, swale grades shall be within

±0.05 feet of the grades indicated on the plans.

B. The disposal of large rocks in excess of 8", within roadways and parking areas is prohibited. Where allowable, the disposal of large rocks by burial in areas designated by the ENGINEER shall have a minimum 30 inches of cover below finished grade elevation.

3.08 FINISH GRADING

A. Following completion of the paving work, all swales, etc., adjacent to the roadway shall be shaped and graded to the elevations and cross-sections shown on the drawings. The finished surface shall be maintained until seeding and mulching work is completed.

3.09 SURVEYS

A. All initial surveys, including detail construction stakes, will be furnished by the CONTRACTOR.

B. The CONTRACTOR will carefully maintain benchmarks, monuments, stakes and other reference points, and if disturbed or destroyed, be replaced as directed at the CONTRACTOR's expense.

3.10 MEASUREMENT AND PAYMENT

A. Measurement and payment for this item will be made per square yard and will include clearing of the swales per Section 02110.

END OF SECTION

SECTION 02315 - FILL AND BACKFILL

PART 1 GENERAL

1.1 DEFINITIONS

A. Prepared Ground Surface. Ground surface after completion of required demolition, clearing and grubbing, scalping of sod, stripping of topsoil, excavation to grade, and subgrade preparation.

B. Completed Course. A course or layer that is ready for next layer or next phase of Work.

C. Lift. Loose (uncompacted) layer of material.

D. Geosynthetics. Geotextiles, geogrids, or geomembranes.

E. Well-Graded:

a. A mixture of particle sizes with no specific concentration or lack thereof of one or more sizes.

b. Does not define numerical value that must be placed on coefficient of uniformity, coefficient of curvature, or other specific grain size distribution parameters.

c. Used to define material type that, when compacted, produces a strong and relatively incompressible soil mass free from detrimental voids.

F. Influence Area. Area within planes sloped downward and outward at 60-degree angle from horizontal measured from:

a. 1-foot outside outermost edge at base of foundations or slabs.

b. 1-foot outside outermost edge at surface of roadways or shoulder.

c. 0.5-foot outside exterior at spring line of pipes or culverts.

G. Borrow Material. Material from required excavations or from designated borrow areas on or near site.

H. Selected Backfill Material. Materials available onsite that CITY PROJECT MANAGER determines to be suitable for specific use.

I. Imported Material. Materials obtained from sources offsite, suitable for specified use.

J. Structural Fill. Fill materials as required under structures, pavements, and other facilities.

K. Embankment Material. Fill materials required to raise existing grade in areas other than under structures.

PART 2 PRODUCTS

2.1 EARTHFILL

A. Excavated material from required excavations and designated borrow sites, free from rocks larger than 3 inches, from roots and other organic matter, ashes, cinders, trash, debris, and other deleterious materials.

B. Material containing more than 10 percent gravel, stones, or shale particles is unacceptable.

C. Provide imported material of equivalent quality, if required to accomplish Work.

2.2 GRANULAR FILL

A. Use graded aggregate base material of uniform quality throughout, substantially free from vegetable matter, shale, lumps and clay balls, and having a Limerock Bearing Ratio value of not less than 100.

B. Aggregate is composed of limestone, marble, or dolomite.

C. Use material retained on the No. 10 sieve composed of aggregate meeting the following requirements:

a. Soundness Loss, Sodium, Sulfate: AASHTO T 104, 15 percent.

b. Percent Wear: AASHTO T 96 (Grading A) 45 percent.

Sieve Size	Percent by Weight Passing
2 inch	100
1-1/2 inch	95 to 100
¾ inch	65 to 90
3/8 inch	45 to 75
No. 4	35 to 60
No. 10	25 to 45
No. 50	5 to 25
No. 200	0 to 10

2.3 WATER FOR MOISTURE CONDITIONING

A. Free of hazardous or toxic contaminates, or contaminants deleterious to proper

compaction.

2.4 FOUNDATION STABILIZATION ROCK

A. General:

a. Materials may be either limerock, shell rock, cemented coquina, or shell base sources approved by the Department.

B. Specific Requirements for Limerock. For limerock, carbonates of calcium and magnesium shall be at least 70 percent. Materials having a plasticity index of more than ten or a liquid limit greater than 40 shall not be used as a stabilizer. The gradation of limerock shall be FDOT No. 57 stone or such that 97 percent of these materials will pass a 3-1/2 inch sieve.

C. Crushed Shell. Crushed shell for this use shall be mollusk shell (i.e., oysters, mussels, clams, cemented coquina). Steamed shell will not be permitted.

D. Crushed shell shall meet the following requirements:

a. Material having a plasticity index of more than ten or a liquid limit greater than 40 shall not be used as a stabilizer.

b. At least 97 percent by weight of the total material shall pass a 3-1/2 inch sieve and at least 50 percent by weight of the total material shall be retained on the No. 4 sieve.

c. Not more than 20 percent by weight of the total material shall pass the No. 200 sieve. The determination of the percentage passing the No. 200 sieve shall be by washing only.

d. If the shell meets the above requirements without crushing, crushing will not be required.

PART 3 EXECUTION

3.1 GENERAL

A. Keep placement surfaces free of water, debris, and foreign material during placement and compaction of fill and backfill materials.

B. Place and spread fill and backfill materials in horizontal lifts of uniform thickness, in a manner that avoids segregation, and compact each lift to specified densities prior to placing succeeding lifts. Slope lifts only where necessary to conform to final grades or as necessary to keep placement surfaces drained of water.

C. During filling and backfilling, keep level of fill and backfill around each structure and buried tank even.

D. If Pipe, Conduit, Duct Bank, or Cable is to be laid within Fill or Backfill:

a. Fill or backfill to an elevation 2 feet above top of item to be laid.

b. Excavate trench for installation of item.

c. Install bedding, if applicable, as specified in Contract Document Section - Trench Backfill.

d. Install item.

e. Backfill pipe zone and remaining trench, as specified in Contract Document Section, Trench Backfill, before resuming filling or backfilling specified in this Section.

E. Tolerances

a. Final Lines and Grades: Within a tolerance of 0.1 foot, unless dimensions or grades are shown or specified otherwise.

b. Grade to establish and maintain slopes and drainage as shown. Reverse slopes are not permitted.

F. Settlement. Correct and repair any subsequent damage to structures, pavements, curbs, slabs, piping, and other facilities, caused by settlement of fill or backfill material.

3.2 BACKFILL UNDER AND AROUND STRUCTURES

A. Under Facilities. Within influence area beneath structures, slabs, pavements, curbs, piping, conduits, duct banks, and other facilities, backfill with granular fill, unless otherwise shown. Place granular fill in lifts of 6-inch maximum thickness and compact each lift to a density of at least 100 percent of the maximum density as determined by AASHTO T99, Method C.

3.3 FILL

A. Outside Influence Areas Beneath Structures, Pavements, Curbs, Slabs, Piping, and Other Facilities: Unless otherwise shown, place earthfill as follows:

a. Allow for proper thickness of topsoil where required.

b. Maximum 8-inch thick lifts.

c. Place and compact fill across full width of embankment.

d. Compact to a density of at least 80 percent of the maximum density as determined by AASHTO T99, Method C.

e. For the outer layer of all fill where plant growth will be established, DO NOT COMPACT. Leave this layer in a loose condition to a minimum depth of 6 inches.

f. Dress completed embankment with allowance for topsoil, crest surfacing, and slope protection, where applicable.

3.4 SITE TESTING

A. Gradation

a. One sample from each 1,500 tons of finished product or more often as determined by CONSULTANT, if variation in gradation is occurring, or if material appears to depart from Specifications.

b. If test results indicate material does not meet Specification requirements, terminate material placement until corrective measures are taken.

c. Remove material placed in Work that does not meet Specification requirements.

B. In-Place Density Tests: In accordance with AASHTO T99, Method C. During placement of materials, test as follows:

a. Earthfill: One test per 400 feet of pipe run.

b. Granular Fill: One test per 400 feet of pipe run.

c. Foundation Stabilization Rock: One test per lift.

3.5 REPLACING OVEREXCAVATED MATERIAL

A. Replace excavation carried below grade lines shown or established by CITY PROJECT MANAGER as follows:

a. Beneath Footings. Granular fill.

b. Beneath Fill or Backfill. Same material as specified for overlying fill or backfill.

c. Beneath Slabs-On-Grade. Granular fill.

d. Trenches:

i. Unauthorized Overexcavation: Either foundation stabilization rock or granular pipe base material, as specified in Contract Documents Section, Trench Backfill.

ii. Authorized Overexcavation: Foundation stabilization rock.

e. Permanent Cut Slopes (Where Overlying Area is Not to Receive Fill or Backfill):

i. Flat to Moderate Steep Slopes (3 to 1, Horizontal Run: Vertical Rise or Flatter): Earthfill.

ii. Steep Slopes (Steeper than 3 to 1):

a. Correct over-excavation by transitioning between over-cut areas and designed slope adjoining areas, provided such cutting does not extend offsite or outside easements and right- of-ways, or adversely impacts existing facilities, adjacent property, or completed Work.

b. Backfilling overexcavated areas are prohibited unless, in CONSULTANT's opinion, backfill will remain stable and overexcavated material is replaced as compacted earthfill.

END OF SECTION

SECTION 02316 - EXCAVATION

PART 1 GENERAL

1.1 QUALITY ASSURANCE

A. Provide adequate survey control to avoid unauthorized over-excavation.

1.2 WEATHER LIMITATIONS

A. Material excavated during inclement weather shall not be used as fill or backfill until after material drains and dries sufficiently for proper compaction.

1.3 SEQUENCING AND SCHEDULING

A. Clearing, Grubbing, and Stripping: Complete applicable Work specified in Contract Documents prior to excavating.

B. Contractor shall call the utility companies 72 hours before excavation per the requirements of the Contract Documents.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL

A. Excavate to lines, grades, and dimensions shown and as necessary to accomplish Work. Excavate to within tolerance of plus or minus 0.1 foot except where dimensions or grades are shown or specified as maximum or minimum. Allow for forms, working space, granular base, topsoil, and similar items, wherever applicable. Trim to neat lines where concrete is to be deposited against earth.

B. It shall be the Contractor’s responsibility to notify business establishments and residents not less than 72 hours prior to construction. Contractor shall, wherever necessary, provide temporary sidewalks and driveway entrances at his own expense, including safe bridges over trenches and fencing around excavations for pedestrian protection.

C. Provide adequate survey control to avoid unauthorized overexcavation. Do not over-excavate without written authorization of CONSULTANT. If the Contractor excavates beyond the limits shown or specified, the Contractor shall replace such excavation at his own expense. Replace over-excavated material as specified in Contract Documents.

D. Where muck, rock, clay, or other material within the limits of excavation is unsuitable in its original position, excavate such material to the cross-sections shown or specified. Backfill with suitable material and shape to the required cross-

section.

E. Remove or protect obstructions as shown on the Drawings.

3.2 UNCLASSIFIED EXCAVATION

A. Excavation is unclassified. Complete all excavation regardless of the type, nature, or condition of the materials encountered.

3.3 TRENCH WIDTH

A. Minimum Width of Trenches:

a. Single Pipes, Conduits, Direct-Buried Cables, and Duct Banks:

i. Less than 4-Inch Outside Diameter or Width: 18 inches.

ii. Greater than 4-Inch Outside Diameter or Width: 18 inches greater than outside diameter or width of pipe, conduit, direct-buried cable, or duct bank.

b. Multiple Pipes, Conduits, Cables, or Duct Banks in Single Trench: 18 inches greater than aggregate width of pipes, conduits, cables, duct banks, plus space between.

c. Increase trench widths by thicknesses of sheeting, if used.

d. The maximum trench width shall not exceed the minimum stated width of the trench unless approved by the CONSULTANT. Restoration for excavation beyond the minimum required width shall be at the Contractor's sole expense.

B. The Contractor shall be responsible to design, provide, and maintain shoring, sheeting, and bracing as necessary to support the sides of excavations and to prevent detrimental settlement and lateral movement of existing facilities, adjacent property, and completed Work.

C. Consider all available geotechnical information available when designing the excavation support system.

D. Remove excavation support in a manner that will maintain support as excavation is backfilled.

E. Do not begin to remove excavation support until support can be removed without damage to existing facilities, completed Work, or adjacent property.

F. Remove excavation support in a manner that does not leave voids in the backfill.

G. For trench excavation exceeding 5 feet in depth, provide adequate safety system meeting requirements of the Occupational Safety and Health Administration's

(OSHA), Trench Safety Standards, 29 C.F.R., S.1926.650, Subpart P, and all subsequent revisions or updates adopted by the Department of Labor and Employment Security.

3.4 EMBANKMENT AND CUT SLOPES

A. Shape, trim, and finish cut slopes to conform with lines, grades, and cross- sections shown, with proper allowance for topsoil or slope protection, where shown.

B. Remove stones and rock that exceed 3-inch diameter and that are loose and may roll down slope. Remove exposed roots from cut slopes.

C. Round tops of cut slopes in soil to not less than a 6-foot radius, provided such rounding does not extend offsite or outside easements and right-of-ways, or adversely impacts existing facilities, adjacent property, or completed Work.

3.5 STOCKPILING EXCAVATED MATERIAL

A. Stockpile excavated material that is suitable for use as fill or backfill until material is needed.

B. Post signs indicating proposed use of material stockpiled. Post signs that are readable from all directions of approach to each stockpile. Signs should be clearly worded and readable by equipment operators from their normal seated position.

C. Confine stockpiles to within easements, rights-of-way, and approved work areas. Do not obstruct roads, streets, public thoroughfares, or access to fire hydrants.

D. Do not stockpile excavated material adjacent to trenches and other excavations unless excavation sideslopes and excavation support systems are designed, constructed, and maintained for stockpile loads.

E. Do not stockpile excavated materials near or over existing facilities, adjacent property, or completed Work, if weight of stockpiled material could induce excessive settlement.

3.6 DISPOSAL OF SPOIL

A. Dispose of excavated materials, which are unsuitable or exceed quantity needed for fill or backfill, offsite.

B. Dispose of debris resulting from removal of organic matter, trash, refuse, and junk as specified in the Contract Documents, for clearing and grubbing debris.

END OF SECTION

SECTION 02319 - SUBGRADE PREPARATION

PART 1 GENERAL

1.1 DEFINITIONS

A. Prepared Ground Surface. Ground surface after completion of clearing and grubbing, scalping of sod, stripping of topsoil, excavation to grade, and scarification and compaction of subgrade.

B. Subgrade. Layer of existing soil after completion of clearing, grubbing, scalping of topsoil prior to placement of fill, roadway structure or base forfloor slab.

C. Proof-Rolling. Testing of subgrade by compactive effort to identify areas that will not support the future loading without excessive settlement.

1.2 QUALITY ASSURANCE

A. Notify CONSULTANT when subgrade is ready for compaction or proof-rolling or whenever compaction or proof-rolling is resumed after a period of extended inactivity.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL

A. Keep subgrade free of water, debris, and foreign matter during compaction or proof-rolling.

B. Bring subgrade to proper grade and cross-section and uniformly compact surface.

C. Do not use sections of prepared ground surface as haul roads. Protect prepared subgrade from traffic.

D. Maintain prepared ground surface in finished condition until next course is placed.

3.2 COMPACTION

A. Under Earthfill: Compact upper 6 inches to minimum of 80 percent of the maximum density as determined by AASHTO T99, Method C.

B. Under Pavement, Floor Slabs on Grade, or Granular Fill under Structures: Compact the upper 12 inches or as shown on the Drawings, to minimum of 100 percent of the maximum dry density as determined by AASHTO T99, Method

3.3 MOISTURE CONDITIONING

A. Dry Subgrade: Add water, then mix to make moisture content uniform throughout.

B. Wet Subgrade: Aerate material by blading, discing, harrowing, or other methods, to hasten drying process.

3.4 TESTING

A. Proof-roll subgrade with equipment specified in Article Compaction to detect soft or loose subgrade or unsuitable material, as determined by CONSULTANT.

3.5 CORRECTION

A. Soft or Loose Subgrade:

a. Adjust moisture content and recompact, or

b. Over excavate and replace with suitable material from the excavation, as specified in the Contract Documents.

c. Unsuitable Material: Over excavate and replace with suitable material from the excavation, as specified in Contract Documents.

END OF SECTION

SECTION 02340 - EROSION CONTROL AND SOIL STABILIZATION

PART 1 GENERAL

1.1 DEFINITIONS

A. Soil Erosion Stabilization:

a. Provide erosion control measures on the Project and in areas where work is accomplished in conjunction with the Project, so as to prevent pollution of water, detrimental effects to public or private property adjacent to the Project.

b. Ground surfaces exposed during the wet season.

c. Areas which will not be subjected to heavy wear by ongoing construction traffic.

d. Temporary and long-term stabilization of new disturbed ditches, swales, storm water ponds, or disturbed ground with intermittent construction traffic.

B. Buffer Zone: Undisturbed area or, strip of natural vegetation, or an established suitable planting adjacent to disturbed area that reduces erosion and runoff.

C. Coordinate the installation of temporary erosion control features with the construction of the permanent erosion control features to the extent necessary to ensure economical, effective, and continuous control of erosion and water pollution.

D. Permanent Stabilization:

a. Permanently stabilize exposed soil surfaces at finished grades.

b. Permanent stabilization methods include, but are not limited to, sodding (permanent), mulching, and landscaping.

c. Immediately perform permanent stabilization at each completed excavation and embankment areas except for areas that are scheduled to be disturbed.

d. Incorporate all permanent erosion control features into the Project at the earliest practical time.

1.2 DELIVERY, STORAGE AND PROTECTION

A. General: Prevent or reduce the discharge of pollutants to storm water from all material delivery or storage by minimizing the storage of hazardous materials

onsite, storing materials in a designated area, installing secondary containment, conducting regular inspection, and training employees or subcontractors.

B. Sod: As specified in the Contract Documents.

C. Mulch: Mark package of mulch to show air-dry weight.

1.3 SEQUENCING AND SCHEDULING

A. Contractor shall accept responsibility for existing soil and erosion control on the site, including maintenance, installed before starting earth disturbance activities.

B. Projects permitted by the South Florida Water Management District require written approval of the erosion/sedimentation control plan. CITY PROJECT MANAGER's acceptance of Construction Period Erosion/Sedimentation Control Plan required prior to starting earth disturbing activities.

C. Complete soil preparation, sodding, fertilizing, mulching, and matting on disturbed areas that will require stabilization either because the area has reached final grade (permanent landscaping) or because the area remains unworked for over 14 days (temporary sodding) during the wet season.

D. Notify CITY PROJECT MANAGER at Least 3 Working Days in Advance of:

a. Materials delivery.

b. Start of planting activity.

E. Sodding: Perform under favorable weather conditions during seasons that are normal, for such Work as determined by accepted local practice.

1.4 MAINTENANCE

A. Operations:

a. Sodded Areas: Perform during maintenance period to include:

i. Watering: Keep surface moist.

ii. Washouts: Repair by filling with topsoil, and replace sodded areas.

iii. Mulch: Replace wherever and whenever washed or blown away.

iv. Resod unsatisfactory areas or portions thereof immediately if a satisfactory stand has not been produced.

b. Inspect, repair, and replace as necessary all erosion control measures during the time period from start of construction to completion of

construction.

c. Inspect a minimum of at least once every 7 days or after each storm event and at least daily during prolonged rainfall. At no time shall more than 1 foot of sediment be allowed to accumulate in any erosion control device. The cleaning operation shall not dispose of sediment offsite.

B. Sediment Removal:

a. Remove sediment from erosion control devices and work into the grading plan at least once a week as required to maintain proper operation of devices. The cleaning operation shall not dispose of sediment offsite.

b. Sediment shall be removed, and the controls upgraded or repaired as needed as soon as practicable, but not later than 2 days after the surrounding exposed ground has dried sufficiently to prevent further damage from equipment needed for repair operations.

c. In the event of continuous rainfall over a 24-hour period, or other circumstances that preclude equipment operation in the area, hand carry and install additional sediment controls as approved by the CITY PROJECT MANAGER.

d. Replace rock filters with new rock at least once a month or when the sediment reduces by one half the filtering capacity of the facility.

PART 2 PRODUCTS

2.1 FERTILIZER

A. Commercial, uniform in composition, free-flowing, suitable for application with equipment designed for that purpose.

B. Fertilizer shall have the Following Minimum Percentage of Plant Food by Weight:

a. Nitrogen: 16 percent.

b. Phosphoric Acid: 4 percent.

c. Potash: 8 percent.

C. At least 50 percent of phosphoric acid shall be from normal superphosphate or an equivalent source which will provide a minimum of two units of sulfur.

2.2 SOD

A. As specified in the Contract Documents.

2.3 MULCH

A. The mulch material shall be dry straw or hay, consisting of oat, rye, or wheat straw, or of pangola, peanut, coastal Bermuda, or Bahia grass, hay or compost; and shall be free from noxious weeds and plants.

B. Any plant officially listed as being noxious or undesirable by any Federal Agency, any agency of the State of Florida or any local jurisdiction in which the project is being constructed shall not be used. Furnish to the CITY PROJECT MANAGER, prior to incorporation onto the project, a certification from the Florida Department of Agriculture and Consumer Services, Division of Plant Industry, stating that the Mulch materials are free of noxious weeds. Any such noxious plant or plant part found to be delivered as mulch will be removed by the Contractor at his expense and in accordance with the law.

C. Only undeteriorated mulch which can readily be cut into the soil shall be used. The “air-dry” weight (as defined by the Technical Association of the Pulp and Paper Industry, for wood cellulose) shall be marked on each package by the producer.

2.4 SOIL TACKIFIER

A. Derived from natural organic plant sources containing no growth or germination-inhibiting materials.

B. Capable of hydrating in water, and readily blend with other slurry materials.

C. Wood Cellulose Fiber: Add as tracer, at rate of 150 pounds per acre.

2.5 EROSION CONTROL MATTING

A. Excelsior mat or straw blanket; staples as recommended by matting manufacturer.

2.6 REINFORCED PLASTIC COVERING

A. Co-extruded, copolymer laminate reinforced with a nonwoven grid of high strength nylon cord submersed in a permanently flexible adhesive media allowing for equal tear resistance in all directions.

B. Black in color and ultraviolet stabilized.

C. Physical Requirement (Minimum Average Roll Values):

a. Tear Strength: 130 pounds.

b. Elongation: 620 percent.

c. Minimum Thickness: 6 mil.

2.7 SILT FENCE

A. Support Posts: As recommended by manufacturer of geotextile.

B. Fasteners: Heavy-duty wire staples at least 1-inch long, tie wires, or hog rings, as recommended by manufacturer of geotextile.

C. Filter Fabric: Polyester, polypropylene, or nylon filaments, woven into a uniform pattern, distinct and measurable openings.

a. Filaments: Resistant to damage from exposure to ultraviolet rays and heat.

b. Material Edges: Finish so that, filaments retain their relative positions under stress.

D. In accordance with requirements of Table No. 1:

Table No. 1 - Filter Fabric		
Physical Property	Required Value	Test Method
Weight, lbs/sq yd, min.	4	ASTM D3776
Equivalent Opening Size, max.	50-70	U.S. Standard Sieve
Grab Tensile Strength, lb, min. ARV	400	ASTM D4632
Elongation, % max.	25	ASTM D1682
Mullen Burst Strength, psi, min. ARV	200	ASTM D3786
Ultraviolet Radiation Resistance, % Strength Retention	80	ASTM D4355
Flow Rate, gpm/sf, min. ARV	30 to 50	ASTM D4491

2.8 STRAW BALES

A. Machine baled clean salt hay or straw of oats, wheat, barley, or rye, free from seed of noxious weeds, using standard baling wire or string.

2.9 POSTS FOR STRAW BALES

A. Two-inch by 2-inch untreated wood, rebar, or commercially manufactured metal posts.

2.10 STABILIZED CONSTRUCTION ENTRANCES

A. Clean pit run or 2 inches minus gravel.

B. Subgrade geotextiles as specified in the Contract Documents.

2.11 DUST CONTROLLER

A. Nontoxic materials that do not have an adverse effect on soil structure or

establishment and growth of vegetation.

a. Calcium chloride meeting the meeting the requirements of AASHTO M144.

b. Water; reasonably clean, and shall be free from suspended water.

2.12 FILTER FABRIC

A. All existing and newly constructed storm drainage structures onsite or adjacent to the site shall be protected with two (2) layers of non-woven filter secured beneath the frame and grate.

B. Filter Fabric shall meet the requirements of Type D-3 meeting the FDOT specifications Section 985.

2.13 FLOATING/STACKED TURBIDITY CURTAINS

A. Curtains shall be minimum 18 ounce nylon reinforced PVC fabric (300 psi Test).

B. Curtains are five (5') standard height and shall reach the bottom for depths up to ten (10') feet of water.

C. Turbidity barriers are required on all outfalls located within the site or adjacent to the site. Location of turbidity barriers will be as approved by CITY PROJECT MANAGER.

PART 3 EXECUTION

3.1 GENERAL

A. Erosion control measures are required during all construction and site disturbance activities, and shall remain until permanent site ground covers are in- place.

B. Limitation of Exposure of Erodible Earth: The CITY PROJECT MANAGER may limit the surface areas of unprotected erodible earth exposed by the construction operation, and may direct the Contractor to provide erosion or pollution control measures to prevent contamination of any river, stream, lake, tidal waters, reservoir, canal, or other water impoundments, or to prevent detrimental effects on property outside the project right-of-way or damage to Project. Limit the area in which excavation and filling operations are being performed so that it does not exceed the capacity to keep the finish grading, grassing, sodding, and other such permanent erosion control measures current in accordance with the accepted schedule.

C. Do not allow the surface area of erodible earth that clearing and grubbing operations or excavation and filling operations expose to exceed 750,000 ft^2 without specific prior approval by the CITY PROJECT MANAGER. This limitation

applies separately to clearing and grubbing operations and excavation and filling operation.

D. The CITY PROJECT MANAGER may increase or decrease the amount of surface area the Contractor may expose at any one time.

E. The implementation of the erosion control plan and the construction maintenance, replacement and upgrading the erosion control devices are the responsibility of the Contractor until all construction is completed and landscaping established and approved. During the construction period, the erosion control devices shall be upgraded for unexpected storm events and to ensure that sediment and sediment laden water do not leave the site.

F. Maintain existing buffer zones adjacent to Project Limits. Keep all construction equipment, debris, and soils out of the natural buffer zone.

3.2 STABILIZED CONSTRUCTION ENTRANCES

A. Provide a graveled construction access at each access point between the site and any public or private road or other paved surfaces.

B. Place subgrade geotextile on the ground prior to aggregate placement.

C. Place aggregate over the subgrade geotextile to a minimum thickness of 8 inches.

D. Minimum dimensions for stabilized construction entrances are 50 feet in length by 20 feet in width.

3.3 SOIL PREPARATION

E. Before start of sodding, and after surface has been shaped and graded, and lightly compacted to uniform grade, scarify soil surface to minimum depth of 1 inch.

3.4 SODDING

A. As specified in the Contract Documents.

3.5 MULCHING

A. Apply uniformly on disturbed areas that will remain undisturbed for 7 days or more, as requested by CITY PROJECT MANAGER, and on all sodded areas.

B. Application: Sufficiently loose to permit penetration of sunlight and air circulation, and sufficiently dense to shade ground, reduce evaporation rate, and prevent or materially reduce erosion of underlying soil.
   a. As recommended by manufacturer.

3.6 SOIL TACKIFIER

A. Spray on after mulch is in place.

B. The soil tackifier shall be applied at the rate per acre specified by manufacturer for applicable grades.

3.7 REINFORCED PLASTIC COVERING

A. Place on areas where sodding and erosion control matting have not controlled erosion, and over all temporary stockpiles.

B. Install in single thickness, strips parallel to direction of drainage. Anchor plastic in 6-inch by 6-inch trench backfilled with compacted native material.

C. Maintain tightly in place by using sand bags on ropes with a maximum 10-foot grid spacing in all directions.

D. Tape or weight down full length, overlap seams at least 12 inches.

E. Remove at final acceptance unless notified otherwise by CITY PROJECT MANAGER.

3.8 SILT FENCE

A. Install prior to starting earth disturbing activities upslope of fence.

B. Install silt fence along contour where shown on the Drawings. Do not deviate from grade more than 4 inches.

C. One-piece filter fabric or continuously sewn to make one-piece filter fabric for full height of the fence, including portion buried in the toe trench.

D. When joints are necessary, splice filter fabric together only at a support post, with a minimum 6-inch overlap, and securely fasten both ends to support post.

E. Filter fabric shall not extend more than 30 inches above the ground surface. Securely fasten to upslope side of each support post using ties. Filter fabric shall not be stapled to existing trees.

F. Take precaution not to puncture filter fabric during installation. Repair or replace damaged area.

G. Remove silt fence after upslope area has been permanently stabilized. Immediately dress sediment deposits remaining after the sediment fence has been removed to conform to existing grade. Prepare and sod graded area.

3.9 TEMPORARY SOIL STOCKPILES

A. Cover with reinforced plastic covering, as directed in Article Reinforced Plastic Covering.

B. Protect perimeter of stockpile from erosion with ditches.

3.10 DUST CONTROL

A. Apply appropriate dust control measures on a continuous basis until permanent stabilization measures are in place.

B. Apply on construction routes and other disturbed areas subject to surface dust movement and where off-site damage may occur if dust is not controlled.

C. Avoid creating erosion when using water as a dust controller.

3.11 STRAW BALES

A. Embed minimum of 4 inches in flat-bottomed trench.

B. Place with ends tightly abutting or overlapped. Corner abutment is not acceptable.

C. Install so that bale bindings are oriented around the sides and not over the top and bottom of the bale.

D. Use two posts for each bale. Drive posts through the bale until top of post is flush with top of bale and post is 1-1/2 feet to 2 feet in the ground.

E. Wedge loose straws in any gaps between bales.

3.12 EROSION CONTROL MATTING

A. Place on sodded slopes 3H to 1V, and steeper.

B. Apply sod and fertilizer prior to matting.

C. At top of slope, entrench material in 6-inch by 6-inch trench. Secure matting at 1-foot intervals down the slope. At the bottom of the slope, extend the mat 2 feet beyond the toe of slope, turn material under 4 inches, and staple at 1-foot intervals.

D. Mats shall be stapled in-place as they are installed down the slope face. The mats shall have direct contact with the soil surface.

E. Overlap:

a. Lengthwise: 1 foot minimum.

b. Crosswise: 6 inches minimum.

3.13 CLEANUP

A. Sediment trapped in erosion control devices shall be removed from the site or regraded into the slopes on the site. Do not flush sediment-laden water into

drainage system.

B. After site restoration is complete and when approved by the CITY PROJECT MANAGER, all temporary erosion control measures shall be completely removed and disposed offsite to locations that are approved by federal, state, and local authorities.

C. Silt fence, straw bales, reinforced plastic covering, and any other erosion control devices shall be disposed offsite to locations that are approved by federal, state, and local authorities.

END OF SECTION

SECTION 02575 - SURFACE RESTORATION

PART 1 GENERAL

1.1 STANDARD SPECIFICATIONS

A. When referenced in this Section, Standard Specifications shall mean the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, current edition and any amendments shown in the City of Fort Engineering Standards for Right of Way Construction.

1.2 INTENT

A. Specific surface restoration requirements are detailed in this and other sections.

B. For pipeline projects, the intent of these Specifications and the criteria of the Measurement and Payment Section is that the roadway, adjacent Right-of-Way, and properties affected by construction activity shall be returned to their pre-existing condition, unless otherwise indicated by these Contract Documents.

a. For pipelines constructed in the Right-of-Way between the sidewalk and edge of pavement, the ground surface will be graded into a swale as shown on the Drawings and provided with sod.

i. Argentine Bahia sod will be used for areas without irrigation systems, except where St. Augustine turf existed previously.

ii. St. Augustine “Floritam” sod will be used for areas with irrigation systems and in locations with similar, existing turf.

iii. Seashore Paspalum sod will be used in areas prone to salt water flooding, Driveways and sidewalks will be placed in kind, using similar materials of construction.

b. Trees, shrubs, and personal property (e.g. mail boxes) located in the swale area shall be relocated or replaced in kind, in accordance with the provisions of the Contract Documents.

C. For work areas disturbed by the Contractor for convenience, the area affected shall be restored in kind.

a. The costs of this restoration shall be incidental to the cost of the Work.

b. Payment for restoration outside the limits of work shall be repaired at the Contractor’s expense.

1.3 WORK INCLUDED

A. This Section covers the Work necessary to replace all pavement, curbs, sidewalks,

rock surfacing, and other street features damaged either directly or indirectly by the operations incidental to the construction described in other sections of the Contract Documents.

B. Where the materials, construction procedures, degree of compaction of materials, and the method of control and testing, as required in the Contract Documents differ from the Standard Specifications requirements, the more stringent requirements shall apply.

C. The intent of the Drawings is to provide a full lane, permanent trench repair for all work crossing or running parallel with roadways. Temporary restoration to provide a passable surface is also required.

D. Overlay of asphalt pavement may be required as shown on the Drawings.

E. Provide finished gradation and grassing in accordance with the Contract Documents.

1.4 OPTIMUM MOISTURE CONTENT

A. "Optimum moisture content" shall be determined by the ASTM standard specified to determine the maximum dry density for relative compaction.

1.5 TEMPORARY TRENCH REPAIR OR STABILIZATION

A. Following pipe installation and prior to permanent trench repair or asphalt replacement, temporary trench repair will be defined as one of the following:

a. Installation of flowable fill as described in this Section and the Contract Documents.

b. Installation of the compacted base course and an asphalt prime coat as described in this Section and the Contract Documents.

B. Temporary trench repair shall be maintained in accordance with the requirements of this Section and the Contract Documents until the final trench repair or asphalt surface is installed to provide a dust-free, drivable, and safe roadway surface.

PART 2 PRODUCTS

2.1 GENERAL

A. All materials for replacement of existing base course and asphalt surfacing shall conform to the Standard Specifications except as modified herein.

B. The Contractor will be responsible for furnishing satisfactory materials that meet the specifications of the Contract Documents and shall provide such tests during the course of the Work as are necessary to assure that the quality of the material used meets the specifications of the Contract Documents.

2.2 LIME ROCK BASE COURSE

A. Aggregate quality and gradation shall meet the requirements of the Standard Specifications.

2.3 BITUMINOUS PRIME AND TACK COAT

A. Prime Coat: Material shall be cutback asphalt, Grade RC-70 or RC-250 meeting the requirements of the Standard Specifications, or approved equal.

B. Tack Coat: Material shall be emulsified asphalt, Grade RS-2, SS-1, or SS-1H meeting the requirements of the Standard Specifications.

C. Tack coats used for temporary trench stabilization shall be sanded to prevent damage to vehicles.

2.4 ASPHALT CONCRETE

A. The asphalt concrete for trench leveling, restoration and overlay shall be Type SP-9.5, meeting the requirements of the Standard Specifications and the Contract Documents.

B. Aggregate: The aggregate shall meet the requirements of the Standard Specifications.

C. Submit test results from commercial testing laboratories to the CITY PROJECT MANAGER to show that the materials meet the quality and gradation requirements.

2.5 CONCRETE PAVERS

A. Pavers shall be placed on approved restored base and subgrade with a 1” layer of bedding sand meeting the requirements of the Standard Specifications.

2.6 FLOWABLE FILL

A. Provide flowable fill with a mix design meeting the requirements of the (FDOT) Standard Specifications for excavatable, flowable fill. Flowable fill may be allowed as a substitute for compacted base upon approval of the CONSULTANT, at no additional cost.

2.7 CONCRETE

A. Concrete shall be 3,000 psi minimum concrete meeting the requirements of the Standard Specifications.

B. Concrete Forms: All forms for curbs and sidewalks shall be either 2-inch dimensioned lumber, plywood, or metal forms. Forms on the face of the curb shall have no horizontal form joints within 7 inches of the top of the curb.

C. Curing Compound: Meeting the requirements of the Standard Specifications.

D. Reinforcing Steel: Conform to ASTM A615, Grade 60.

2.8 TRAFFIC MARKINGS

A. All traffic striping markings (i.e., lane, edge of pavement, directional, informational, etc.) damaged by the Contractor during construction shall be replaced with new markings meeting the requirements of the Broward County Traffic Engineering Division and the Standard Specifications.

B. Raised reflective pavement markers (rpm's) damaged by the Contractor during construction shall be replaced with new rpm's meeting the requirements of the Broward County Traffic Engineering Division and the Standard Specifications.

C. The Contractor shall place and maintain temporary striping markings throughout the course of the work until the permanent striping marking is placed on the final roadway surface.

D. The Contractor shall provide traffic stripping at all intersections including stop bars and crosswalks as required whether they are currently stripped or not. It shall be the Contractor's responsibility to take a complete inventory and provide the appropriate permanent stripping after the completion of the Work.

2.9 SWALE STABILZATION

A. Materials used for stabilization of swale areas as indicated on the Drawings shall consist of suitable excess existing base material removed from trenching operations, if approved by the CONSULTANT, crushed limerock, rock screenings, or other suitable material as approved by the CONSULTANT.

a. Materials having a plasticity index of more than 10, or a liquid limit greater than 40 shall not be used.

b. Maximum dimension shall not exceed 1.5 inches.

PART 3 EXECUTION

3.1 CONSTRUCTION PROCEDURE

A. The CITY PROJECT MANAGER reserves the right to vary the type of resurfacing as best serves the interest of the Owner. Trench backfill shall be as specified in the Contract Documents.

B. Replace all bituminous and concrete roadway pavement damaged or removed under this Contract with asphalt concrete regardless of original type. Pavement thickness shall be in accordance with the Drawings.

C. In addition to the requirements set forth herein, the work shall conform to the applicable workmanship requirements of the state and county highway or

municipal specifications.

D. Water to control dust shall be used as directed by the CITY PROJECT MANAGER until the trench repair has been stabilized. If control of dust is inadequate by these means, the CITY PROJECT MANAGER may direct the immediate application of a prime or tack coat in accordance with the provisions of this Section, at no additional cost to the Owner. The CITY PROJECT MANAGER reserves the right to delay additional excavation activities until dust control measures are adequate.

E. Base course and prime coat shall be installed to provide temporary trench stabilization within 5 working days of trench backfill or as soon thereafter as the as-built conditions and pipe slopes have been verified.

F. Final, permanent trench repair, and paving shall be installed within 3 weeks of pipe verification and temporary trench stabilization, unless flowable fill is used for temporary trench repair, in accordance with the provisions of this Section.

3.2 REMOVAL OF PAVEMENT, SIDEWALK, CURBS, AND GUTTERS

A. Removal of all pavement, sidewalks, curbs, and gutters shall conform to the Contract Documents, and payment for removal shall be included in that Section of the Contract Documents. Payment for removal is incidental to the cost of pipe installation except where required for water and sewer service installation.

3.3 CUTTING EXISTING PAVEMENT

A. Where new pavement abuts existing pavement, the old pavement shall be trimmed by saw cutting to a straight line. Any pavement which has been damaged or which is broken and unsound shall be removed to provide a smooth, sound edge for joining new pavement.

3.4 STREET MAINTENANCE

A. Maintain all trenches as specified in this section and the Contract Documents.

3.5 CONSTRUCTION OF BASE COURSE

A. Base course shall be constructed in accordance with the City of Fort Lauderdale Standards and the Standard Specifications.

B. Compact base materials to a minimum of 98 percent of the maximum density as determined by AASHTO T180. Corrections for oversize material may be applied to either the as-compacted field dry density or the maximum dry density, as determined by the CONSULTANT. Where the base is constructed in more than one course, the density shall be obtained in each lift.

C. Alternately, and with the approval of the CONSULTANT, the Contractor shall provide a minimum 10 inches of excavatable, flowable fill. The flowable fill shall be placed up to 1 ½ inches from the top of the existing pavement or to the fill line

without vibration or compaction. Flowable fill shall not be placed during periods of inclement weather and rainfall. Provide a means to confine the material within the designated space. Flowable fill installed in accordance with this provision shall comply with temporary pavement restoration provisions.

3.6 MILLING OR GRINDING OF EXISTING ASPHALT PAVEMENT

A. Milling of existing asphalt pavement shall meet the requirements of the Standard Specifications.

B. Milling shall be used to lower the grade of adjacent existing asphalt prior to trench repair to completely remove existing asphalt.

C. Milled and ground asphalt can be mixed for use with the limerock base course material.

3.7 BITUMINOUS PRIME AND TACK COAT

A. The bituminous prime coat shall be applied to the lime rock base immediately following the placement of the compacted base course. The prime coat shall be maintained with additional coats as determined by the CITY PROJECT MANAGER as temporary restoration until the final asphalt surface is installed. Additional prime coats will be provided at no cost to the Owner.

B. The lime rock base shall be hard planed with a blade grader immediately prior to the application of the prime coat.

C. The rate of application of the bituminous prime coat shall meet the requirements of the Standard Specifications.

D. The bituminous tack coat shall be applied to existing asphalt surfaces prior to the placement of new asphalt, between layers of asphalt concrete surface courses, surfaces of concrete footings that will come in contact with the asphalt concrete pavement, and vertical faces of all longitudinal and transverse joints that have become compacted or cooled.

E. The rate of application for the bituminous tack coat shall meet the requirements of the Standard Specifications.

3.8 ASPHALT CONCRETE PAVEMENT REPLACEMENT

A. Preparation for Paving:

a. A prime coat shall be applied over the full length of the roadway, and asphalt concrete pavement shall not be placed until the prime coat has cured as per the manufacturer's recommendations.

b. Should any holes, breaks, or irregularities develop in the roadway surface after the prime coat has been applied, they shall be patched with asphalt

concrete immediately in advance of placing the asphalt concrete.

c. After the maintenance, patching, or repair work has been completed and immediately prior to placing the asphalt concrete pavement, the surface of the prime coat shall be swept clean of all dirt, dust, or other foreign matter.

B. The proposed pavement reconstruction schedule consists of immediately paving over trenches as soon as possible after it has been determined that subbase and base have achieved required compactions. The base course will be brought up to the elevations indicated on the Drawings and asphalt placed to bring grade up to match existing pavement elevations as shown on the Drawings.

C. For deep excavations where the pavement repair constitutes a full lane or roadway, workmanship shall conform to the standards and details of new road way construction.

a. Existing pavement more than 2 feet wide beyond the trench area shall be left in place and a full overlay applied to the limits of the existing road width.

b. Existing base beyond the trench area shall be left in place.

c. Full lane or width roadways shall have a consistent cross-section and straight edge of pavement delineation's.

3.9 CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT OVERLAY – IF REQUIRED

A. The Contractor shall place a layer of tack coat at a rate of 0.05 to 0.12 gallon per square yard over all areas to receive asphalt concrete.

B. Lay asphalt concrete over all areas designated to be resurfaced. The asphalt concrete pavement overlay shall be placed in minimum 1-inch lift and maximum lift as shown in the Contract Documents. The method of proportioning, mixing, transporting, laying, processing, rolling the material, and the standards of workmanship shall meet the applicable requirements of the Standard Specifications. At no time shall the coarse aggregate segregated from the mix either from hand spreading or raking of joints be scattered across the paved mat. Such material shall be collected and disposed of.

C. The CITY PROJECT MANAGER will examine the prepared roadway before the paving is begun and bring any deficiencies to the Contractor's attention to be corrected before the paving is started. Roll each lift of the asphalt concrete until roller marks are eliminated and compacted to 100 percent of the laboratory compacted mixture. The grade, line, and cross section of the finished surface shall conform to the Drawings. Asphalt or asphalt stains which are noticeable upon surfaces of concrete or materials which will be exposed to view shall be promptly and completely removed.

3.10 ASPHALT CONCRETE PAVEMENT

A. Workmanship in producing, hauling, placing, compacting, and finishing asphalt concrete shall meet the applicable portions of the Standard Specifications.

3.11 CONNECTIONS WITH EXISTING FACILITIES

A. Where the bituminous pavement is to be connected with an existing roadway surface or other facility, the Contractor will be required to modify the existing roadway profile in such a manner as to produce a smooth riding connection to the existing facility. The Contractor shall meet existing neat lines where required.

B. Where it is necessary to remove existing asphalt surfaces or oil mat surfaces to provide proper meet lines and riding surfaces, the Contractor shall sawcut the existing surface so that there will be sufficient depth to provide a minimum of 1-inch of asphalt concrete, and the waste material shall be disposed of to the satisfaction of the CONSULTANT. Prior to placing the asphalt concrete, these areas shall be tacked. Meet lines shall be straight and the edges vertical. The edges of meet line cuts shall be painted with liquid asphalt or emulsified asphalt prior to placing asphalt concrete. After placing the asphalt concrete, the meet line shall be sealed by painting with a liquid asphalt or emulsified asphalt and immediately covered with clean, dry sand.

3.12 CONSTRUCTION OF COURSES

A. The asphalt concrete pavement shall be constructed in one or more courses as shown on the Drawings.

B. Rolling shall continue until all roller marks are eliminated and compacted to 100 percent of the laboratory compacted mixture has been obtained.

3.13 SURFACE TOLERANCE

A. Tests for conformity with the specified grade shall be made by the Contractor immediately after initial compression. Any variation shall be immediately corrected by the removal or addition of materials and by continuous rolling.

B. The completed surface of the pavement shall be of uniform texture, smooth, uniform as to grade, and free from defects of all kinds. The completed surface shall not vary more than 1/8 inch from the lower edge of a 12-foot straightedge placed on the surface along the centerline or across the trench.

C. After completion of the final rolling, the smoothness and grade of the surface shall again be tested by the Contractor.

D. When deviations in excess of the above tolerances are found, the pavement surface shall be corrected as stated in the Standard Specifications.

E. All areas in which the surface of the completed pavement deviates more than twice the allowable tolerances described above shall be removed and replaced to the satisfaction of the CONSULTANT.

F. All costs involved in making the corrections of defects described above shall be borne by the Contractor and no compensation will be made for this Work.

3.14 SAMPLES

A. If directed by the CONSULTANT, the Contractor shall without additional charge, provide the CITY PROJECT MANAGER with test results of samples of asphalt concrete cut from the completed pavement or the individual courses thereof for each occurrence. Provide a minimum of three test cores located as directed by the CONSULTANT. He shall also provide the CITY PROJECT MANAGER with test results of samples of the uncompressed asphalt concrete mixtures and all materials incorporated in the Work.

3.15 WEATHER CONDITIONS

A. Asphalt shall not be applied to wet material. Asphalt shall not be applied during rainfall or any imminent storms that might adversely affect the construction. The CITY PROJECT MANAGER will determine when surfaces and materials are dry enough to proceed with construction. Asphalt concrete shall not be placed during heavy rainfall or when the surface upon which it is to be placed is wet.

3.16 PROTECTION OF STRUCTURES AND ADJUSTMENT OF APPURTENANCES

A. Provide whatever protective coverings may be necessary to protect the exposed portions of bridges, culverts, curbs, gutters, posts, guard fences, road signs, and any other structures from splashing oil and asphalt from the paving operations. Remove any oil, asphalt, dirt, or any other undesirable matter that may come upon these structures by reason of the paving operations.

B. Where water valve boxes, manholes, catch basins, or other underground utility appurtenances are within the area to be surfaced, the Contractor shall adjust the tops of these facilities to conform with the proposed surface elevations. The Contractor shall notify the proper authority and either raise or lower the appurtenances or make arrangements with that authority for having the facilities altered at the Contractor's expense before proceeding with the resurfacing. The Contractor will be responsible for making certain that appurtenances are brought to proper grade to conform with finished surface elevations and any delays experienced from such obstructions will be considered as incidental to the paving operation. No additional payment will be made. Protect all covers during asphalt application. All adjustments shall be made in accordance with the requirements of the respective utility.

C. To extend manhole use grade rings as specified, do not use leveling rings. Remove the frame and cover, rebuild the manhole top to raise it so that the new height meets the overlay elevations and then replace the frame and cover in accordance with the Contract Documents.

3.17 EXCESS MATERIALS

A. Dispose of all excess materials. Make arrangements for the disposal and bear all costs or retain any profit incidental to such disposal.

3.18 CONTRACTOR'S RESPONSIBILITY

A. Settlement of replaced pavement over trenches within the warranty period shall be considered the result of improper or inadequate compaction of the subbase or base materials. The Contractor shall promptly repair all pavement deficiencies noted during the warranty period at the Contractor's sole expense.

3.19 SIDEWALKS AND CURBS

A. Replace concrete sidewalks and curbs to the same section width, depth, line, and grade as that removed or damaged or as shown on the Drawings. The minimum thickness of sidewalks shall be 6 inches. Cut ends of existing curb to a vertical plane. Prior to replacing the sections, properly backfill and compact the trench to prevent subsequent settlement.

B. Replace concrete sidewalks at scored joints and make replacement in a manner that will avoid a patched appearance. Provide a minimum 2-inch thick compacted leveling course of clean sand or gravel of quality hereinbefore specified. Finish concrete surface similar to the adjacent sidewalks. All curbs and all gutters shall have a minimum of 4” LBR 100 limerock “curb pad”.

3.20 DRIVEWAYS AND WALKS

A. Replace asphalt driveways and walks in accordance with Paragraph Asphalt Concrete Pavement Replacement.

B. Replace concrete and paver driveways in kind, using similar materials of construction. Concrete driveways shall consist of a reinforced, 6-inch section installed in accordance with the Contract Documents.

3.21 TRAFFIC STRIPES

A. All areas having traffic stripes prior to paving shall be restriped. Temporary traffic striping shall be applied immediately after asphalt pavement has been placed. Permanent traffic striping may be applied only after the proper curing time for the asphalt. Traffic stripes (temporary and permanent) shall meet the requirements of Broward County Traffic Engineering Division Standards and the Standard Specifications.

3.22 INSTALLATION OF RAISED REFLECTIVE PAVEMENT MARKERS

All areas having raised reflective pavement markers prior to paving shall have those markers replaced. Temporary pavement markers shall be applied immediately after asphalt pavement has been placed. Permanent pavement markers may be applied only after the proper curing time for the asphalt. Pavement markers and adhesive (temporary and permanent) shall meet the requirements of Broward County Traffic Engineering

Division and the Standard Specifications.

A. Spacing: As shown in the Roadway and Traffic Design Standards for Design, Construction, Maintenance and Utility operations on the State Highway System by the State of Florida, Department of Transportation, current edition and the Broward County Traffic Engineering Division Standards.

3.23 PAVEMENT REPAIR

A. All damage to pavement as a result of work under this Contract shall be repaired in a manner satisfactory to the CITY PROJECT MANAGER and at no additional cost to the Owner. The repair shall include preparation of the subgrade, placing and compaction of the lime rock base and placement of the final asphalt surface as described in this Section.

B. The width of all repairs shall extend at least 12 inches beyond the limit of the damage with the edge of pavement left saw cut to a true edge with no irregularities. For county roads and CITY streets recently constructed or overlaid, the repair may be required to be full-lane width as shown on the Drawings.

3.24 SWALE RESTORATION

a. New or existing swale areas (areas between pavement edge and sidewalks, or right-of-way line if there is no existing or proposed sidewalk) shall be graded and reshaped to the cross section shown on the Drawings. Where storm inlets are present, the swale shall have a consistent longitudinal slope towards the inlet.

b. Swale areas with previously existing improved surfaces, including but not limited to asphalt, concrete, pavers, crushed or decorative rock, shall be restored in kind. Asphalt paved areas shall be constructed with a minimum 6-inch stabilized subbase and minimum 6-inch compacted limerock base, primed and topped with minimum 1-inch asphalt.

c. Swale areas with previously unimproved or turfed surfaces will be restored with soil stabilization where existing natural soil will not support vehicle loads normally imposed by movement and parking of heavy vehicles without rutting and shifting of soil. Subject to the approval of the CONSULTANT, this work may be performed in connection with preparation of subgrade or construction of the limerock base course.

d. Swale areas with previously unimproved or turfed surfaces will be topped with sod. St. Augustine “Floritam” and two inches of topsoil shall be used in irrigated areas and where St. Augustine sod was previously established. Bahia sod shall be placed in all other areas not previously improved or sodded.

3.25 SWALE STABILIZATION

3.25.1 Where swale stabilization is required as indicated above, stabilization shall be achieved by the addition and mixing in of suitable stabilizing materials. It shall be

incorporated into the existing swale soils by plowing, disking, harrowing, blading or mixing with rotary tillers or other appropriate equipment approved by the CONSULTANT, until the mixed materials are of uniform bearing value throughout the width and at least 6-inch depth from the top of the swale after the swale is graded and shaped to the section indicated on the plans.

3.25.2 The swale areas shall be mixed and compacted to achieve a minimum average dry density of 90 percent throughout the 6-inch thickness, as determined by AASHTO T180. In the determination of such average, the minimum acceptable density shall be 85 percent and the maximum density which shall be used in calculations shall be 100 percent (if the tested density is reported above 100 percent).

3.25.3 Density tests for swale stabilization shall be made at intervals not less than one set of three per CITY block on each side of the roadway, or at increased intervals as directed by the CITY PROJECT MANAGER when required to measure small or isolated sections (except where such testing may be considered unnecessary by the CONSULTANT). Each set of three shall be averaged as indicated above for determination of meeting the minimum requirements.

3.26 SPECIAL SWALE REPAIR

3.26.1 Certain swale areas (designated on Drawings) have longitudinal trench filled with ballast rock for drainage. If appropriate, a separate pay item applies for removal and reconstruction of ballast rock drainage damaged during installation of pipelines. All other aspects of restoration work in the swale will be paid for separately under the restoration item. Swale stabilization will not be required in those areas with ballast rock drainage.

3.27 BRICK OR PAVER RESTORATION

3.27.1 Remove and salvage bricks or paver materials to be disturbed by the work. Payment will be made in accordance with the unit price for these items.

3.27.2 Restore pavers and apron area shall be constructed as shown in the Drawings. Payment will be made in accordance with the unit price for these items.

3.27.3 Paver and apron areas shall be constructed as shown in the Drawings.

3.27.4 If brick and paver materials are damaged, new materials shall match or all materials within the crossing must be replaced at no additional cost. New materials shall be approved by the Owner.

END OF SECTION

SECTION 02630 - STORM DRAINAGE FACILITIES

PART 1 GENERAL

1.1 SUMMARY

A. Work under this section shall consist of providing all labor, plant facilities, materials, tools, equipment, shop drawings and supervision necessary and required to install all of the storm drainage facilities, including piping, fittings, structures, bedding, and backfilling, as specified in accordance with the contract documents.

1.2 WORK INCLUDED

A. Provide all labor, materials, necessary equipment and services to complete the Storm Drainage Facilities work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

1.3 REFERENCE STANDARDS

A. American Society For Testing and Materials (ASTM)

a. A185 – Steel Welded Wire Fabric, Plain, for Concrete Reinforcement

b. A615 – Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

c. A760 – Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains

d. A798 – Installation of Corrugated-Steel Pipe for Sewers and Other Applications

e. A929 – Metallic-Coated by the Hot-Dip Process for Corrugated Steel Pipe

f. C76 – Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

g. C478 – Precast Reinforced Concrete Manhole Sections

h. C1479 – Installation of Reinforced Concrete Pipe

i. C990-01A – Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants

j. D2321 – Installation of Thermoplastic Pipe for Sewer/Gravity-Flow Applications

k. D3034 – Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

l. D3212 – Joints for Drain and Sewer Plastic Pipes Using Elastomeric Seals

m. F477 – Elastomeric Seals (Gaskets) for Joining Plastic Pipe

n. F794 – Poly(Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter

o. F949 – Poly(Vinyl Chloride) (PVC) Corrugated Sewer Pipe With a Smooth Interior and Fittings

B. American Association of State Highway and Transportation Officials (AASHTO)

a. M198 – Joints for Circular Concrete Sewer and Culvert Pipe Using Flexible Watertight Gaskets

b. M252 – Corrugated Polyethylene Drainage Tubing

c. M274 – Aluminum-Coated (Type 2), for Corrugated Steel Pipe

d. M294 – Corrugated Polyehtylene Pipe. 12 to 14 inch Diameter

e. M36 – Metallic Coated Corrugated Steel Culverts and Underdrains

f. M190 – Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches

g. M199 – Standard Specification for Precast Reinforced Concrete Manhole Sections

C. American Water Works Association (AWWA)

a. C110 – Ductile-Iron and Gray-Iron Fittings, 3 in through 48 in (75 mm through 1200 mm), for Water and Other Liquids (revision of ANSI/AWWA C110/A21.10-93)

b. C111 – Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

c. C151 – Ductile-Iron Pipe, Centrifugally Cast, for Water

d. American Concrete Institute (ACI)

e. 301 – Structural Concrete for Buildings, Specifications for

f. 318 – Building Code Requirements for Structural Plain Concrete

1.4 CLEARING

A. Clearing or installation of pipe and all drainage structures shall be confined within the working limits of the trenches. Trees, utility poles, survey monuments, underground and overhead utilities shall be suitably protected and preserved.

1.5 EXISTING UTILITIES

A. Furnish temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, cables, etc., and other obstructions encountered

in the progress of the work.

B. When the grade of alignment of the pipe is obstructed by existing utility structures, such as conduits, ducts, pipes, branch connections to water or sewer mains, and other obstructions, the obstructions shall be permanently supported, relocated, removed or reconstructed by the CONTRACTOR in cooperation with the owners of such structures. No deviation shall be made from the required line or grade except as directed in writing by the CITY PROJECT MANAGER.

C. It shall be the responsibility of the CONTRACTOR to notify the owners of existing utilities in the area of construction a minimum of 48 hours prior to any excavation adjacent of such utilities, so that field locations of said utilities may be established.

D. Temporary relocation of existing utilities (to be removed) to accommodate installation of storm drain pipe shall be the responsibility of the CONTRACTOR and approved by the CITY PROJECT MANAGER. No additional payment shall be made for temporary relocation of existing utilities and shall be considered part of the bid item for the pipe.

1.6 PROJECT RECORD DOCUMENTS

A. Accurately record as-built locations of pipe runs, connections, catch basins, cleanouts, top elevations and invert elevations.

B. Identify and describe unexpected variations of subsurface conditions and location of any utilities encountered.

1.7 QUALITY ASSURANCE

A. All costs related to re-inspection due to failures shall be paid for by the CONTRACTOR at no additional expense to the OWNER. OWNER reserves the right to direct any inspection that is deemed necessary. CONTRACTOR shall provide free access to site for inspection activities.

PART 2 PRODUCTS

2.1 PIPE

A. Reinforced concrete culvert pipe:

B. Concrete pipe shall be produced by a reputable manufacturer engaged in the full time business of manufacturing concrete pipe. Pipe manufacturer shall produce the pipe from an approved, permanent plant acceptable to the CITY PROJECT MANAGER.

C. All concrete pipe shall be reinforced and shall conform to the requirements of ASTM C-76. "Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe". All pipe shall be a minimum of Class III. Pipe shall have an interior surface which is smooth, uniform and free from rough spots, irregularities and projections. Nominal pipe lengths shall be 8'

unless authorized otherwise by the CITY PROJECT MANAGER. Lifting holes will be permitted, one hole per length.

a. Concrete pipe may be either bell and spigot, tongue and groove or modified tongue and groove.

b. Internal rubber gasket joints shall be used. The internal rubber gasket joint shall be supplied by the pipe manufacturer and shall be completely compatible in every respect with the pipe furnished. The rubber gasket on the inside of the bell or groove shall be installed on the pipe at the plant by the pipe manufacturer. All materials and accessories for the rubber gasket joint and the methods of jointing shall be in strict conformance with the pipe manufacturer's direction and recommendation. Joint must be completely water tight.

c. Cement grout joints shall be completely water tight and acceptable to the CITY PROJECT MANAGER. A full bed of mortar shall be placed in the bell and/or groove and on the tongue and/or spigot. The annular space in the pipe joint shall be wiped with cement mortar to insure the joint is filled and to present a smooth surface. The complete exterior periphery of the joint shall have a standard cement grout diaper joint. Diaper shall be installed with the aid of an approved cloth ring. Cement mortar joints shall be made in the dry. Mortar and grout shall be one part Portland Cement to two parts by weight of sand. Mortar shall have enough water to make a stiff mixture that can be molded and worked. Cement mortar joints shall not be covered until inspected and approved by the CITY PROJECT MANAGER.

B. High performance polypropylene pipe:

a. High Performance polypropylene storm pipe shall be produced by a reputable manufacturer engaged in the full time business of manufacturing of piping.

b. All High Performance polypropylene storm pipe shall have a smooth wall interior and annular exterior corrugations conforming to the requirements of ASTM F2736 and AASHTO M330.

c. Joints: Pipe shall be joined with a gasket integral bell and spigot joint meeting the requirements of ASTM F2736. Joint must be completely water tight according to the requirements of ASTM 3212. Spigots shall have gaskets meeting requirements of ASTM F477. The gasket joint on the inside of the bell shall be installed on the pipe at the plant by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant provided from the manufacturer shall be used on the gasket and bell during assembly. All materials and accessories for the gasket joint and the methods of jointing shall be in strict conformance with the pipe manufacturer's direction and recommendation.

C. High density polyethylene pipe:

a. High Density Polyethylene Pipe (HDPE), shall be corrugated type, smooth interior, conforming to ASTM F2648, ASTM F477, ASTM 3212, AASHTO M252 and

AASHTO M294 and shall be smooth interior and annular exterior corrugations with a Manning's "n" value of 0.012l.

b. Basic Material:

c. Extruded Pipe and Blow Molded Fittings: Pipe and fittings shall be made of virgin PE compounds which conform with the requirements for Type III, Category 4 or 5, Grade P33, Class C; or Grade P34, Class C, as defined and described in ASTM D 1248.

d. Rotational Molded Pipe and Fittings: Pipe and fittings shall be made of virgin PE compounds which conform with the requirements of Type III, Category 3, Grade P33, Class C: or Grade P34, Class C, as defined and described in ASTM D1248.

e. Corrugated Polyethylene Pipe shall meet the requirements as describe in ASTM D 2412 for pipe stiffness.

f. Corrugated Polyethylene Pipe shall be in accordance for brittleness with ASTM D 2444.

D. PVC corrugated pipe:

a. PVC Corrugated storm pipe shall be produced by a reputable manufacturer engaged in the full time business of manufacturing of piping and conform to the requirements of ASTM F949.

b. PVC Corrugated storm pipe shall have smooth wall interior and annular exterior corrugations. Pipe shall be made of PVC having a minimum cell classification of 12454 per ASTM D1784.

c. Joints: Pipe shall be joined with a gasket integral bell and spigot joint meeting the requirements of ASTM F2736. Joint must be completely water tight according to the requirements of ASTM 3212. Spigots shall have gaskets meeting requirements of ASTM F477. The gasket joint on the inside of the bell shall be installed on the pipe at the plant by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant provided from the manufacturer shall be used on the gasket and bell during assembly. All materials and accessories for the gasket joint and the methods of jointing shall be in strict conformance with the pipe manufacturer's direction and recommendation.

PART 3 EXECUTION

3.1 GENERAL

A. CONTRACTOR shall only use the pipe material as specified on the plans. Alternate materials will not be allowed unless approved by the CITY PROJECT MANAGER in writing.

B. The CONTRACTOR shall install all drainage structures and pipe in the locations shown on the drawings and/or as approved by the OWNER. Pipe shall be of the type and sizes specified on the drawings and shall be laid accurately to line and grade. Structures shall be accurately located and properly oriented.

C. Excavation and Backfilling for Utilities – The provisions of the Contract Documents for Excavation and Backfilling shall govern all work under this Section.

D. Storage and Handling of Pipe – All pipe shall be protected against impact, shock and free fall, and only equipment of sufficient capacity and proper design shall be used in the handling of the pipe. Storage of pipe on the job shall be in accordance with the pipe manufacturer's recommendations.

E. Damage to Pipe

a. Pipe which is defective from any cause, including damage caused by handling, and determined by the OWNER as unrepairable, shall be unacceptable for installation and shall be replaced at no cost to the OWNER and as directed by the OWNER; and,

b. Pipe that is damaged or disturbed through any cause prior to acceptance of the work, shall be repaired realigned or replaced as directed by the OWNER, at the CONTRACTOR's expense.

F. Manholes, catch basins and drain inlets shall be constructed as soon as the pipe laying reaches the location of the structures. Should the CONTRACTOR continue his pipe laying without making provisions for completion of the structures, the OWNER shall have the authority to stop the pipe laying operations until the structure is completed.

G. Any structure, which is mislocated or oriented improperly, shall be removed and re-built in its proper location, alignment and orientation at the CONTRACTOR's expense.

3.2 EXCAVATIONS

A. Trenches shall be kept as nearly vertical as possible and, if required, shall be properly sheeted and braced. Where, in the opinion of the CITY PROJECT MANAGER, damage could result from withdrawing sheeting, the sheeting shall be left in place. Not more than 100 feet of trench shall be opened at any one time or in advance of pipe laying unless permitted by the CITY PROJECT MANAGER.

a. Except in rock, water-bearing earth or where a granular or concrete base is to be used, mechanical excavation of trenches shall be stopped above the final grade elevation so that the pipe may be laid on a firm, undisturbed native earth bed. If overdigging occurs, all loosened earth shall be removed and the trench bottom brought back to grade with granular material.

b. Excavations and trenches in rock shall be carried to a depth of not less than 8 inches below the pipe bottom. This space shall be filled with granular material or washed rock.

c. Width of trenches shall be such as to provide adequate space for placing and jointing pipe properly, but in every case the trench shall be kept to a minimum width.

d. Any unstable soil encountered shall be removed and replaced with gravel, crushed rock or rock and sand suitably compacted.

3.3 PREPARATION TO TRENCH BOTTOM

A. Water shall not be allowed in the trenches while the trench bottom is being prepared or while pipe is being installed, unless directed by the CITY PROJECT MANAGER.

B. A continuous trough shall be shaped to receive the bottom quadrant of the pipe barrel. Bell holes shall be excavated so that after placement, only the barrel of the pipe receives bearing pressure from the trench bottom.

C. Where unsuitable soil conditions are encountered, the trench bottom shall be excavated to a minimum of 8 inches below the proposed bottom of the pipe, and a trough as described above shall be formed with sharp sand or bedding rock to uniformly support the bottom quadrant of the pipe barrel.

3.4 BEDDING

A. Bedding material, when required, shall be in accordance with the Contract Documents.

3.5 PIPE INSTALLATION

A. Laying Pipe

a. Unloading and Handling: All pipes shall be unloaded and handled with reasonable care. Pipes shall not be rolled or dragged over gravel or rock during handling. The CONTRACTOR shall take necessary precautions to ensure the method used in lifting or placing the pipe does not induce stress fatigue in the pipe and the lifting device used uniformly distributes the weight of the pipe along its axis or circumference.

b. Each length of pipe shall be inspected for defects and cracks before carefully lowered into the trench. Any damaged or any pipe that has had its grade disturbed after laying shall be removed and replaced. Bituminous coated pipe shall be handled with special care and repair of damaged coating shall conform with AASHTO M190.

c. Lay pipe on prepared foundation starting at the downgrade end according to line and grade with the necessary drainage structures, fittings, bends and appurtenances as shown on the drawings. Rigid pipes shall be laid with the bell or groove ends upgrade with the spigot or tongue fully inserted. Reinforced concrete pipe shall be installed in accordance with ASTM C1479.

d. Pipe sections shall be firmly joined together with appropriate gaskets or bands.

e. Pipe shall be protected during handling against impact shocks and free falls. Pipe shall be kept clean at all times and no pipe shall be used that does not conform to the Specifications.

f. The laying of the pipe shall be commenced at the lowest point with spigot ends pointing in the direction of flow. All pipe shall be laid with ends abutting and true to line and grade. They shall be laid in accordance with manufacturer's requirements as approved by the CITY PROJECT MANAGER.

g. Pipe shall be laid accurately to the line and grade as designated on the plans. Preparatory to making pipe joints, all surfaces of the portions of the pipe to be jointed, or of the factory made jointing material, shall be clean and dry. Lubricant, primers, adhesive, etc., shall be used as recommended by the pipe or joint manufacturer's specifications. The jointing materials or factory fabricated joints shall then be placed, fitted, joined and adjusted in such a manner as to obtain a water tight line. As soon as possible after the joint is made, sufficient backfill material shall be placed along each side of the pipe to prevent movement of pipe off line and grade.

h. The exposed ends of all pipe shall be suitably plugged to prevent earth, water, or other substances from entering the pipe when construction is not in progress.

3.06 BACKFILLING TRENCHES

A. No trenches or excavations shall be backfilled until the trench and installation has been inspected and approval given by the CITY PROJECT MANAGER. Under no circumstances shall water be permitted to rise in unbackfilled trenches after pipe has been placed. Trenches shall be backfilled with approved material, free of large clods, stones or rocks and carefully deposited in layers not to exceed 6 inches until enough fill has been placed to provide a cover of not less than 1 foot above the pipe. Each layer shall be placed, then carefully and uniformly tamped, so as to eliminate the possibility of pipe displacement. The remainder of backfill materials shall then be placed, moistened and compacted in 8 inch layers to 98% maximum AASHTO T-180 density.

B. Whenever the trenches have been improperly filled or if settlement occurs, they shall be refilled, compacted, smoothed off and made to conform to grade. Unless otherwise directed or shown on the plans, backfill in trenches in or through roadways shall be made as specified above, except that the entire fill above 1 foot over the pipe shall be deposited in layers not to exceed 8 inches in thickness, moistened, and compacted to density equal to or greater than that of adjacent material so that pavement can be placed immediately.

3.07 CONCRETE ENCASEMENT OF DRAINAGE PIPE

A. Trenches in which encasement for pipe are to be placed may be excavated completely with mechanical equipment. Prior to formation of the encasement, temporary supports consisting of timber wedges or masonry shall be used to support the pipe in place.

Temporary supports shall have minimum dimensions and shall support the pipe at no more than two places, one at the bottom of the barrel of the pipe adjacent to the shoulder of the socket and the other near the spigot end.

3.08 DRAINAGE STRUCTURES

A. All structures shall be built to the line and grade shown on drawings. All reinforced concrete work shall be in strict conformance with the concrete specifications contained herein. After erection of the forms and placing of the steel, the CONTRACTOR must have inspection and approval from the CITY PROJECT MANAGER before placing any concrete. After removal of the forms, the CONTRACTOR shall backfill around each structure with approved granular fill. The fill shall be placed in layers not exceeding 8 inches in depth measured loose and compacted to 98% of the maximum density as determined by the modified proctor, AASHTO T-180. No defects of any kind in the pipe section will be accepted. All pipe stubs shall be made of the same type of pipe. Pipe stubs shall be sealed with a concrete plug, water tight. The ends of the pipes which enter masonry shall be neatly cut to fit the inner face of the masonry. Cutting shall be done before the pipes are built in.

3.09 INFILTRATION AND EXFILTRATION TESTS

A. Tests for watertightness shall be made by the CONTRACTOR. Leakage of completed storm drainage system shall not exceed 500 U.S. gallons per day per inch diameter per mile of pipe under minimum hydrostatic pressure of 2 feet. Test shall be conducted in a manner satisfactory to the CITY PROJECT MANAGER. Any portion of the project not conforming to the above requirements shall be corrected by the CONTRACTOR, at his own expense, prior to acceptance by the CITY PROJECT MANAGER.

3.10 RESTORATION OF SURFACES AND/OR STRUCTURES

A. The CONTRACTOR shall restore and/or replace paving, curbing, sidewalks, fences and survey points, or any other disturbed surfaces or structures to a condition equal to that before the work was begun and to the satisfaction of the CITY PROJECT MANAGER. Relative to restoration of surfaces and/or structures, the CONTRACTOR shall comply with all requirements of governing agencies including city, town, county and state.

3.11 PROTECTION AND CLEANING

A. The CONTRACTOR shall maintain all pipe installations and drainage structures in a condition such that they will function continuously and shall be kept clean of silt, debris and other foreign matter from the pipe and drainage structure is installed until the project is accepted.

3.12 FINAL INSPECTION

A. All storm sewers shall be lamped by the CITY PROJECT MANAGER prior to acceptance of the work. Repairs or misalignment shown necessary by the tests shall be corrected at the CONTRACTOR's expense. All sewers shall be thoroughly cleaned before being

placed into use and shall be kept clean until final acceptance by the CITY PROJECT MANAGER.

B. Upon completion of the work and before final acceptance by the OWNER, the entire drainage system shall be subject to a final inspection in the presence of the OWNER and/or CITY PROJECT MANAGER. The work shall not be considered as complete untilall requirements for line, grade, cleanliness, and workmanship have been completed.

END OF SECTION

SECTION 02710 - LIMEROCK BASE

PART 1 GENERAL

1.1 DEFINITIONS

A. Completed Course: Compacted, unyielding, free from irregularities, with smooth, tight, even surface, true to grade, line, and cross section.

B. Completed Lift: Compacted with uniform surface reasonably true to cross-section.

PART 2 PRODUCTS

2.1 LIMEROCK BASE ROCK

A. The material used in limerock base shall be material classified as Miami Oolite Formation.

B. The minimum of carbonates of calcium and magnesium in the limerock shall be 70 percent. The maximum percentage of water-sensitive clay material shall be 3.

C. Limerock material shall be uniform in color and not contain cherty or other extremely hard pieces, or lumps, balls, or pockets of sand or clay size material in sufficient quantities as to be detrimental to the proper bonding, finishing, or strength of the limerock base.

D. The limerock base shall be uniformly graded from coarse to fine with 97 percent passing a 3-1/2-inch sieve, 80 percent passing a 2-inch sieve. The fine material shall consist entirely of dust of fracture. All crushing or breaking up, which might be necessary in order to meet such size requirements, shall be done before the material is placed on the road.

E. Physical Qualities:

a. Liquid Limit, AASHTO T89: Maximum 35 percent.

b. Nonplastic.

c. Limerock material shall have an average limerock bearing ratio (LBR) value of not less than 100.

2.2 SOURCE QUALITY CONTROL

A. Contractor: Perform tests necessary to locate acceptable source of materials meeting specified requirements.

B. Final approval of aggregate material will be based on materials' test results on installed materials.

C. Should separation of coarse from fine materials occur during processing or

stockpiling, immediately change methods of handling materials to correct uniformity in grading.

PART 3 EXECUTION

3.1 SUBGRADE PREPARATION

A. As specified in the Contract Documents.

B. Obtain CONSULTANT's acceptance of subgrade before placement of limerock base rock.

C. Do not place base materials on soft, muddy subgrade.

3.2 EQUIPMENT

A. Use mechanical rock spreaders, equipped with a device that strikes off the rock uniformly to laying thickness, capable of producing even distribution. For areas where the use of a mechanical spreader is not practicable, the Contractor may spread the rock using bulldozers or blade graders.

3.3 HAULING AND SPREADING

A. Hauling Materials:

a. The limerock shall be transported to the point where it is to be used and dumped on the end of the preceding spread.

b. Do not haul over surfacing in process of construction.

c. Loads: Of uniform capacity.

d. Maintain consistent gradation of material delivered; loads of widely varying gradations will be cause for rejection.

B. Spreading Materials:

a. Distribute material to provide required density, depth, grade and dimensions with allowance for subsequent lifts.

b. Produce even distribution of material upon roadway without segregation.

c. Should segregation of coarse from fine materials occur during placing, immediately change methods of handling materials to correct uniformity in grading.

3.4 CONSTRUCTION OF COURSES

A. General: Complete each lift in advance of laying succeeding lift to provide required results and adequate inspection.

B. Limerock Base:

a. Maximum Completed Lift Thickness: 6 inches or equal thickness.

b. Completed Course Total Thickness: As shown.

c. Spread lift on preceding course to required cross-section.

d. Lightly blade and roll surface until thoroughly compacted.

e. Blade or broom surface to maintain true line, grade, and cross-section.

C. Gravel Surfacing:

a. Maximum Completed Lift Thickness: 6 inches or equal thickness.

b. Completed Course Total Thickness: As shown.

c. Spread on preceding course in accordance with cross-section shown.

d. Blade lightly and roll surface until material is thoroughly compacted.

3.5 ROLLING AND COMPACTION

A. Commence compaction of each layer of base after spreading operations and continue until density of 98 percent of maximum density has been achieved as determined by AASHTO T 180.

B. Density tests will be conducted every 500 square yards or as directed by the CITY PROJECT MANAGER.

C. Roll each course of surfacing until material shall not creep under roller before succeeding course of surfacing material is applied.

D. Commence rolling at outer edges of surfacing and continue toward center; do not roll center of road first.

E. When the material does not have the proper moisture content to ensure the required density, wet or dry, as required. When adding water, uniformly mix it in by disking to the full depth of the course that is being compacted. During wetting or drying operations, manipulate as a unit, the entire width and depth of the course that is being compacted.

F. Place and compact each lift to required density before succeeding lift is placed.

G. Bind up preceding course before placing leveling course. Remove floating or loose stone from surface.

H. Blade or otherwise work surfacing as necessary to maintain grade and cross-section at all times, and to keep surface smooth and thoroughly compacted.

I. Surface Defects: Remedy surface defects by loosening and rerolling. Reroll entire area, including surrounding surface, until thoroughly compacted.

J. Finished Surface: True to grade and crown before proceeding with surfacing.

3.6 SURFACE TOLERANCES

A. Finished Surface of Base Course and Leveling Course: Within plus or minus 0.04-foot of grade shown at any individual point.

B. Compacted Surface of Leveling Course: Within 0.04-foot from lower edge of 10-foot straightedge placed on finished surface, parallel to centerline.

C. Overall Average: Within plus or minus 0.01-foot from crown and grade specified.

3.7 DRIVEWAY RESURFACING

A. Replace gravel surfacing on driveways which were gravel surfaced prior to construction.

B. Provide compacted gravel surfacing to depth equal to original, but not less than 4 inches.

C. Leave each driveway in as good or better condition as it was before start of construction.

3.8 FIELD QUALITY CONTROL

A. In-Place Density Tests:

a. Construct base course so areas shall be ready for testing.

b. Allow reasonable length of time for CITY PROJECT MANAGER to perform tests and obtain results during normal working hours.

3.9 CLEANING

A. Remove excess material; clean stockpile areas of aggregate.

END OF SECTION

SECTION 02761 - PAVEMENT MARKING

PART 1 GENERAL

1.1 STANDARD SPECIFICATIONS

A. When referenced in this section, Standard Specifications shall mean Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, current edition. All Pavement Markings and Signage shall conform to the Broward County Traffic Engineering Division Standards, latest revision.

1.2 SUBMITTALS

A. The CONTRACTOR shall submit its proposed formula for the asphaltic concrete paving for review in accordance with the Section entitled “Submittals”.

1.3 DELIVER, STORAGE, AND PROTECTION

A. Packaging and Labeling: All coatings and traffic marking materials shall be shipped in strong containers plainly marked with the weight in pounds per gallon, the volume of coatings and traffic marking materials content in gallons, the color, user information, date of manufacture, LOT, batch and DOT code number. Each batch manufactured shall have a unique number. A true statement of the percentage composition of the pigment, the proportion of pigment to vehicle, and the name and address of the manufacturer, also shall be shown. The label shall warn the user of any special handling or precautions of the material, as recommended by the manufacturer. Any package not so marked will not be accepted for use under these Specifications.

B. Storage: Any coatings and traffic marking materials which, although inspected and approved at the point of manufacture, hardens or livers in the containers so that it cannot be readily broken up with a paddle to a smooth, uniform painting consistency, will be rejected. All materials shall have a container storage life of one year from date of manufacture. Any coatings and traffic marking materials not acceptable for proper application will be rejected, even though it conforms to these Specifications in all other respects.

C. Mixing: All paints except aluminum shall be delivered to the project completely mixed, and ready to be used without additional oil or thinner. Gasoline shall not be used for thinner under any circumstances.

PART 2 PRODUCTS

2.1 PAINT

A. Color: White, yellow, or blue traffic striping meeting the requirements of Broward County Traffic Engineering Division and the Standard Specifications.

B. Homogeneous, easily stirred to smooth consistency, with no hard settlement or other objectionable characteristics during a storage period of 6 months.

2.2 THERMOPLASTIC STRIPING

A. White or yellow thermoplastic striping material meeting the requirements of Broward County Traffic Engineering Division and the Standard Specifications.

2.3 RAISED REFLECTIVE MARKERS

A. Metallic or nonmetallic, or prismatic reflector type, of permanent colors retaining color and brightness under action of traffic.

B. Rounded surfaces presenting a smooth contour to traffic. The minimum area of each reflective face shall be 2-1/2 inches squared.

C. Marker and adhesive epoxy in accordance with ASTM D4280

D. Markers shall meet the requirements of Broward County Traffic Engineering Division and the Standard Specifications.

2.4 GLASS SPHERES

A. Glass spheres shall be of a composition designed to be highly resistant to traffic wear and to the effects of weathering.

B. In accordance with AASHTO M247, Type I with moisture resistant coating or a formulation specified by the traffic striping material manufacturer and the Broward County Traffic Engineering Division and the Standard Specifications.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

A. Cleaning:

a. Thoroughly clean surfaces to be marked before application of pavement marking material.

b. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water or a combination of these methods.

c. Completely remove rubber deposits, surface laitance, existing paint markings, and other coatings adhering to pavement with scrapers, wire brushes, sandblasting, approved chemicals, or mechanical abrasion.

d. Scrub areas of old pavement affected with oil or grease with several applications of trisodium phosphate solution or other approved

detergentor degreaser, and rinse thoroughly after each application.

e. Surfaces shall be completely free of dry dirt and ice, and dry of water at the time of application of any of the materials specified herein.

f. Oil-Soaked Areas: After cleaning, seal with cut shellac to prevent bleeding through the new paint.

g. Reclean surfaces when Work has been stopped due to rain.

h. Existing Pavement Markings:

i. Remove existing pavement markings that may interfere or conflict with newly applied marking patterns, or that may result in a misleading or confusing traffic pattern.

ii. Do not apply thermoplastic markings over existing preformed or thermoplastic markings.

iii. Perform grinding, scraping, sandblasting or other operations so finished pavement surface is not damaged.

B. Pretreatment for Early Striping: Where early striping is required on rigid pavements, pretreat with an aqueous solution containing 3 percent phosphoric acid and 2 percent zinc chloride.

C. New Concrete Pavement:

a. Allow a minimum cure time of 30 days before cleaning and marking.

b. Clean by either sandblasting or water blasting to the following results:

i. No visible evidence of curing compound on peaks of textured concrete surface.

ii. No heavy puddled deposits of curing compound in valleys of textured concrete surface.

iii. Remaining curing compound is intact, with loose and flaking material completely removed.

iv. Peaks of textured pavement surface are rounded in profile and free of sharp edges and irregularities.

D. Allow a minimum drying time of 24 hours after water blasting before applying thermoplastic markings.

3.2 ALIGNMENT FOR MARKINGS

A. The Contractor shall be responsible for all measurements, reference points and

marks, string lining, and any other steps required in establishing pavement marking locations and alignment. On tangents and on curves up to 1 degree, the alignment of the marking shall not deviate from the string line by more than 1 inch. On curves exceeding 1 degree, the maximum permissible deviation shall be 2 inches. All alignment width and location shall conform to the details shown on the Drawings.

3.3 PAINT APPLICATION

A. General:

a. Thoroughly mix pigment and vehicle together prior to application, and keep thoroughly agitated during application.

b. Do not add thinner.

c. Apply only when air and pavement temperatures are above 40 degrees F and less than 95 degrees F. Maintain paint temperature within these same limits.

d. Apply only when surface is dry.

e. Do not apply when conditions are windy to the point of causing overspray or fuzzy line edges.

f. New Asphalt Pavement: Allow a minimum pavement cure time as recommended by the manufacturer before applying paint.

g. Provide guide lines and templates to control paint application.

h. Take special precautions in marking numbers, letters, and symbols.

i. Sharply outline edges of markings and apply without running or spattering.

B. Rate of Application:

a. Reflective Markings:

i. Paint: Apply evenly, 105 plus or minus 5 square feet per gallon.

ii. Glass Beads: Apply uniformly, 6 plus or minus 0.5 pounds of glass spheres per gallon of paint.

b. Nonreflective Markings: Apply paint evenly to pavement surface at a rate of 105 plus or minus 5 square feet per gallon.

c. On new pavement or new asphalt surface treatments, apply two coats of paint at a uniform rate of 210 square feet per gallon.

C. Drying:

a. Provide maximum drying time to prevent undue softening of bitumen and pickup, displacement, or discoloration by traffic.

b. If drying is abnormally slow, discontinue painting operations until cause is determined and corrected.

3.4 THERMOPLASTIC MARKING APPLICATION

A. Following specified surface preparation, prime and apply marking and glass beads to provide a reflectorized strip as shown on Drawings.

B. The material shall be applied to the pavement by the extrusion method only, wherein one side of extrusion shaping die is the pavement and the other sides are formed by suitable equipment for heating and controlling the flow of the material.

C. Application Temperatures:

a. Pavement Surface: Minimum 40 degrees F and rising.

b. Thermoplastic: Minimum 375 degrees F, maximum 425 degrees F.

D. Primer:

a. On portland cement concrete and existing asphalt pavements, apply epoxy resin primer/sealer according to the thermoplastic manufacturer's recommendations.

b. All primer/sealer to dry prior to applying thermoplastic.

E. Thermoplastic Marking:

a. Extrude in a molten state, free of dirt or tint. at a thickness of 0.10 to 0.15 inch for lane lines and 0.07 to 0.10 inch for edge or other lines in accordance with FDOT Design Standards.

b. Apply centerline, skipline, edgeline, and other longitudinal type markings with a mobile applicator.

c. Apply special markings, crosswalks, stop bars, legends, arrows, and similar patterns with a portable, extrusion-type applicator.

F. Glass Bead Application:

a. Immediately after marker application, mechanically apply such that the beads are held by and imbedded in the surface of the molten material.

b. Application Rate: One pound per 20 square feet of compound.

G. Cool completed marking to ambient temperature prior to allowing vehicular traffic.

3.5 INSTALLATION OF RAISED REFLECTIVE MARKERS

A. Apply markers to the bonding surface using bituminous adhesives only.

B. Apply the adhesive to the binding surface (not the marker) so that 100 percent of the bonding area of the marker will be covered.

C. Align markers carefully, projecting no more than 3/4-inch above level of pavement. Reflective face of the marker shall be perpendicular to a line parallel to the roadway centerline. Do not install markers over longitudinal or transverse joints of the bonding surface.

D. Spacing: As shown on the Drawings.

E. Immediately remove excess adhesive from the bonding surface and exposed surface of the marker.

F. Use only a mineral spirits meeting Federal Specifications TT-T-291 to remove adhesive from exposed faces of markers.

3.6 GLASS BEAD APPLICATION

A. Apply immediately following application of paint.

B. Use evenly distributed, drop-on application method.

C. Rate: 10 pounds per gallon of paint.

3.7 PROTECTION

A. The CONTRACTOR shall erect adequate warning signs and/or provide sufficient number of flagmen, and take all necessary precautions for the protection of the materials and safety of the public.

B. Protect surfaces from disfiguration by paint spatters, splashes, spills, or drips.

3.8 CLEANUP

A. Remove paint spatters, splashes, spills, or drips from Work and staging areas and areas outside of the immediate Work area where spills occur.

END OF SECTION

SECTION 02771 - CONCRETE CURBS AND SIDEWALKS

PART 1 GENERAL (NOT USED)

PART 2 PRODUCTS

2.1 EXPANSION JOINT FILLER

A. 1/2-inch thick, preformed asphalt-impregnated, expansion joint material meeting AASHTO M153 Type I, II, or III, or AASHTO M213, or cellulose fiber types meeting the requirements of AASHTO M213, except the asphalt content is acceptable provided they contain minimum of 0.2 percent copper pentachlorophenate as a preservative and 1 percent water proofing wax.

2.2 CONCRETE

A. Ready-mixed meeting ASTM C94, Option A, with compressive strength of 3,000 psi at 28 days.

B. Maximum Aggregate Size: 1-1/2 inch.

C. Slump: 2 to 4 inches.

2.3 CURING COMPOUND

A. Liquid membrane-forming, clear or translucent, suitable for spray application and meeting ASTM C309, Type 1.

PART 3 EXECUTION

3.1 FORMWORK

A. Lumber Materials:

a. 2-inch dressed dimension lumber, or metal of equal strength, straight, free from defects that would impair appearance or structural quality of completed curb and sidewalk.

b. 1-inch dressed lumber or plywood may be used where short-radius forms are required.

B. Metals: Steel in new undamaged condition.

C. Setting Forms:

a. Construct forms to shape, lines, grades, and dimensions.

b. Stake securely in place.

D. Bracing:
   a. Brace forms to prevent change of shape or movement resulting from placement.

   b. Construct short-radius curved forms to exact radius.

E. Tolerances:

   a. Do not vary tops of forms from gradeline more than 1/8 inch when checked with 10-foot straightedge.

   b. Do not vary alignment of straight sections more than 1/8 inch in 10 feet.

3.2 PLACING CONCRETE

A. Excavate to the required depth, place and compact limerock base rock as specified in the Contract Documents. Compact directly under the area and 1 foot beyond each side of the sidewalk and curb.

B. Prior to placing concrete, remove water from excavation and debris and foreign material from forms.

C. Place concrete as soon as possible, and within 1-1/2 hours after adding cement to mix without segregation or loss of ingredients, and without splashing.

D. Place, process, finish, and cure concrete in accordance with applicable requirements of ACI 304, and this section. Wherever requirements differ, the more stringent shall govern.

E. To compact, vibrate until concrete becomes uniformly plastic.

F. All edges shall be smooth and rounded.

3.3 CURB CONSTRUCTION

A. Construct ramps at pedestrian crossings in compliance with FDOT and PROWAG minimum standards. Standards apply to work in the City’s Rights of Way.

B. Expansion Joints: Place at maximum 20-foot intervals and at the beginning and end of curved portions of curb, and at connections to existing curbs. Install expansion joint filler at each joint.

C. Gutter minimum slope shall be 0.33% unless otherwise approved by the CITY PROJECT MANAGER.

D. Curb Facing: Do not allow horizontal joints within 7 inches from top of curb.

E. All gutters and curb and gutters shall have a minimum 4” thick limerock curb pad” LBR 100.

F. Contraction Joints:

a. Maximum 10-foot intervals in curb.

b. Provide open joint type by inserting thin, oiled steel sheet vertically in fresh concrete to force coarse aggregate away from joint.

c. Insert steel sheet to full depth of curb.

d. Remove steel sheet with sawing motion after initial set has occurred in concrete and prior to removing front curb form.

e. Finish top of curb with steel trowel and finish edges with steel edging tool.

G. Front Face:

a. Remove front form and finish exposed surfaces when concrete has set sufficiently to support its own weight.

b. Finish formed face by rubbing with burlap sack or similar device to produce uniformly textured surface, free of form marks, honeycomb, and other defects.

c. Remove and replace defective concrete.

d. Apply curing compound to exposed surfaces of curb upon completion of finishing.

e. Continue curing for minimum of 5 days.

H. Backfill curb with earth upon completion of curing period, but not before 7 days has elapsed since placing concrete.

a. Backfill shall be free from rocks 2 inches and larger and other foreign material.

b. Compact backfill firmly.

3.4 SIDEWALK CONSTRUCTION

A. Thickness:

a. 6 inches.

B. Connection to Existing Sidewalk:

a. Remove old concrete back to an existing contraction joint.

b. Clean the surface.

c. Apply a neat cement paste immediately prior to placing new sidewalk.

C. Expansion Joints: Place at maximum 20-foot intervals, at adjacent curb expansion joint, where sidewalk ends at curb, and around posts, poles, or other objects penetrating sidewalk. Install expansion joint filler at each joint.

D. Contraction Joints:

a. Provide transversely to walks at locations opposite contraction joints in curb.

b. Dimensions: 3/16-inch by 1-inch weakened plane joints.

c. Construct straight and at right angles to surface of walk.

E. Finish:

a. Broom surface with fine-hair broom at right angles to length of walk and tool at edges, joints, and markings.

b. Ensure that the surface variations are not more than ¼ inch under a 10-foot straightedge, or more than 1/8 inch on a 5-foot transverse section.

c. Mark walks transversely at 5-foot intervals, or in pattern shown on Drawings, with jointing tool; finish edges with rounded steel edging tool.

d. Apply curing compound to exposed surfaces upon completion of finishing.

e. Protect sidewalk from damage and allow to cure for at least 7 days.

F. Curb Ramps:

a. All curb ramps and detectable warnings shall comply with the current CITY Engineering Standard Details for Right of Way work and the Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way by the United States Access Board.

END OF SECTION

SECTION 02772 - ASPHALT CONCRETE PAVEMENT

PART 1 GENERAL

1.1 Standard Specifications

A. When referenced in this Section, Standard Specifications shall mean Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, current edition.

1.2 QUALITY ASSURANCE

A. Qualifications:

a. Independent Testing Laboratory: In accordance with ASTM E329.

b. Asphalt concrete mix formula shall be prepared by an approved certified independent laboratory under the supervision of a certified asphalt technician.

1.3 SUBMITTALS

A. The CONTRACTOR shall submit its proposed formula for the asphaltic concrete paving for review in accordance with the Section entitled “Submittals”.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Temperature: Do not apply asphalt materials or place asphalt mixes when ground temperature is lower than 10 degrees C (50 degrees F), or air temperature is lower than 4 degrees C (40 degrees F). Measure ground and air temperature in shaded areas away from heat sources or wet surfaces.

B. Moisture: Do not apply asphalt materials or place asphalt mixes when application surface is wet.

PART 2 PRODUCTS

2.1 MATERIALS

A. Prime Coat: Cut-back asphalt, Grades RC-70 or RC-250 meeting the requirements of the Standard Specifications.

B. Tack Coat: Emulsified asphalt, Grade RS-2, SS-1, or SS-1H meeting the requirements of the Standard Specifications. The bituminous material shall be heated to a suitable consistency as directed by the CITY PROJECT MANAGER.

C. Sand (Blotter Material): Clean, dry, with 100 percent passing a 4.75 mm (No. 4) sieve, and a maximum of 10 percent passing a 75 mm (No. 200) sieve.

2.2 ASPHALT CONCRETE MIX

A. General:

a. Mix formula shall not be modified except with the written approval of CITY PROJECT MANAGER.

b. Source Changes:

i. Should material source(s) change, establish a new asphalt concrete mix formula before the new material(s) is used.

ii. Perform check tests of properties of the plant-mix bituminous materials on the first day of production and as requested by CITY PROJECT MANAGER to confirm that properties are in compliance with design criteria.

iii. Make adjustments in gradation or asphalt content as necessary to meet design criteria.

B. Asphalt Concrete: Type SP meeting the requirements of the Standard Specifications.

C. Composition: Hot-plant mix of aggregate, mineral filler, and paving grade asphalt cement. The several aggregate fractions shall be sized, uniformly graded, and combined in such proportions that the resulting mixture meets the grading requirements of the mix formula.

D. Aggregate:

a. The aggregate shall meet the requirements of the Standard Specifications.

b. Mineral Filler shall meet the requirements of the Standard Specifications

E. Asphalt Cement: Paving Grade AC-30 meeting the requirements of the Standard Specifications.

PART 3 EXECUTION

3.1 GENERAL

A. Traffic Control: Minimize inconvenience to traffic, but keep vehicles off freshly treated or paved surfaces to avoid pickup and tracking of asphalt.

B. Driveways: Repave driveways from which pavement was removed. Leave driveways in as good or better condition than before start of construction.

3.2 LINE AND GRADE

A. Provide and maintain intermediate control of line and grade, independent of the underlying base to meet finish surface grades and minimum thickness.

B. Shoulders: Construct to line, grade, and cross-section shown.

3.3 PREPARATION

A. Prepare subgrade as specified in the Contract Documents.

B. Existing Roadway:

a. Modify profile by grinding, milling, or overlay methods as approved, to provide meet lines and surfaces and to produce a smooth riding connection to existing facility.

b. Resurface entire roadway following adjustment of base and asphalt grades.

c. Paint edges of meet line with tack coat prior to placing new pavement.

C. Thoroughly coat edges of contact surfaces (curbs, manhole frames) with emulsified asphalt or asphalt cement prior to laying new pavement. Prevent staining of adjacent surfaces.

3.4 PAVEMENT APPLICATION

A. General: Place asphalt concrete mixture on an approved, prepared base in conformance with this Section.

B. Cold Milling

a. Milling of existing asphalt pavement shall be at the depth and location as indicated on the Construction DRAWINGS or as directed by the OWNER.

b. The milled surface shall be reasonably smooth and free of excessive scarification marks, gouges, ridges, continuous grooves, or other damage. The milled pavement surface shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material by the use of power brooms, power blowers, power vacuums or other means.

c. The CONTRACTOR shall coordinate the adjustment of maintenance access structures, meter boxes, drainage inlets, and valve boxes with the milling operation.

d. All milled material shall become the property of the CONTRACTOR and shall be disposed of off-site or used in conformance with the Contract Documents, or for utilization as Reclaimed Asphalt Pavement, in

conformance with the specification provided above, as approved by the OWNER.

C. Prime Coat:

a. Heat cut-back asphalt between 100 degrees F and 150 degrees F prior to application.

b. Apply uniformly to clean, dry surfaces. Avoiding overlapping of applications.

c. Do not apply when moisture content of upper 3 inches of base exceeds optimum moisture content of base, or if free moisture is present.

d. Application Rate: Minimum 0.1 gallons per square yard of surface area.

e. Remove or redistribute excess material.

f. Allow a minimum of 5 full days for curing of primed surface before placing asphalt concrete.

D. Tack Coat:

a. Apply uniformly to clean, dry surfaces. Avoiding overlapping of applications.

b. Do not apply more tack coat than necessary for the day's paving operation.

c. Touch up missed or lightly coated surfaces and remove excess material.

d. Application Rate:

i. Minimum 0.05 gallons to maximum 0.12 gallons of asphalt (residual if diluted emulsified asphalt) per square yard of surface area.

ii. Apply at rate, within range specified, sufficient to assure good bonding, but not so heavy that surplus asphalt flushes into asphalt concrete being placed.

E. Pavement Mix:

a. Prior to Paving:

i. Sweep primed surface free of dirt, dust, or other foreign matter.

ii. Patch holes in primed surface with asphalt concrete pavement mix.

iii. Blot excess prime material with sand.

b. Place asphalt concrete pavement mix in lifts as shown.

c. Compacted Lift Thickness:

i. Minimum: Twice the maximum aggregate size, but in no case less than 1 inch. Minimum thickness for Type SP-9.5 is 1.0 inches.

ii. Maximum: 4 inches.

d. Total Compacted Thickness: Per Contract Documents.

e. Apply such that meet lines are straight and edges are vertical.

f. Collect and dispose of segregated aggregate from raking process. Do not scatter material over finished surface.

g. Joints:

i. Offset edge of each layer a minimum of 6 inches so joints are not directly over those in underlying layer.

ii. Offset longitudinal joints in roadway pavements, so longitudinal joints in wearing layer coincide with pavement centerlines and lane divider lines.

iii. Form transverse joints by cutting back on previous day's run to expose full vertical depth of layer.

h. Succeeding Lifts: Apply tack coat to pavement surface between each lift.

i. After placement of pavement, seal meet line by painting a minimum of 6 inches on each side of the joint with cut-back or emulsified asphalt. Cover immediately with sand.

F. Compaction:

a. Roll until roller marks are eliminated and compacted to 100 percent of the laboratory compacted mixture.

b. Joint Compaction:

i. Place top or wearing layer as continuously as possible.

ii. Pass roller over unprotected end of freshly laid mixture only when placing of mix is discontinued long enough to permit mixture to become chilled.

iii. Cut back previously compacted mixture when Work is resumed to produce a slightly beveled edge for full thickness of layer.

iv. Cut away waste material and lay new mix against fresh cut.

G. Tolerances:

a. General: Conduct measurements for conformity with crown and grade immediately after initial compression. Correct variations immediately by removal or addition of materials and by continuous rolling.

b. Completed Surface or Wearing Layer Smoothness:

i. Uniform texture, smooth, and uniform to crown and grade.

ii. Maximum Deviation: 1/8 inch from lower edge of a 12-foot straightedge, measured continuously parallel and at right angle to centerline.

iii. If surface of completed pavement deviates by more than twice the specified tolerances, remove and replace wearing surface.

c. Transverse Slope Maximum Deviation: ¼ inch in 12 feet from the rate of slope shown.

d. Finished Grade:

i. Perform a field differential level survey on a maximum 50-foot grid and along all grade breaks.

ii. Maximum Deviation: 0.02 foot from the grade shown.

H. Seal Coat:

a. General: Apply seal coat of paving grade or emulsified asphalt to finished surface at longitudinal and transverse joints, joints at abutting pavements, areas where the asphalt concrete was placed by hand, patched surfaces, and other areas as directed by the CITY PROJECT MANAGER.

b. Preparation:

i. Maintain surfaces that are to be sealed free of holes, dry, and clean of dust and loose material.

ii. Seal in dry weather and when the temperature is above 35 degrees F.

c. Application:

i. Fill cracks over 1/16 inch in width with an asphalt-sand slurry or approved crack sealer prior to sealing.

ii. When sealing patched surfaces and joints with existing pavements, extend minimum 6 inches beyond edges of patches.

3.5 PAVEMENT OVERLAY

A. Preparation:

a. Remove fatty asphalt, grease drippings, dust, and other deleterious matter.

b. Surface Depressions: Fill with asphalt concrete mix, and thoroughly compact.

c. Damaged Areas: Remove broken or deteriorated asphalt concrete and patch as specified in Article Patching.

d. Portland Cement Concrete Joints: Remove joint filler to minimum 1/2 inch below surface.

B. Application:

a. Tack Coat: As specified in this Section.

b. Place and compact asphalt concrete as specified in Article Pavement Application.

c. Place first layer to include widening of pavement and leveling of irregularities in the surface of the existing pavement.

d. When leveling irregular surfaces and raising low areas, the actual compacted thickness of any one lift shall not exceed 2 inches.

e. The actual compacted thickness of intermittent areas of 120 square yards or less may exceed 2 inches, but not 4 inches.

f. Final wearing layer shall be of uniform thickness, and meet grade and cross-section as shown.

3.6 PATCHING HOT MIX ASPHALT

A. Preparation:

a. Remove damaged, broken, or unsound asphalt concrete adjacent to patches. Trim to straight lines exposing smooth, sound, vertical edges.

b. Prepare patch subgrade as specified in the Contract Documents.

B. Application:

a. Patch Thickness: 3 inches or thickness of adjacent asphalt concrete, whichever is greater.

b. Place asphalt concrete mix across full width of patch in layers of equal thickness.

c. Spread and grade asphalt concrete with hand tools or mechanical spreader, depending on size of area to be patched.

C. Compaction:

a. Roll patches with power rollers capable of providing compression of 200 to 300 pounds per linear inch. Use hand tampers where rolling is impractical.

b. Begin rolling top course at edges of patches, lapping adjacent asphalt surface at least 1/2 the roller width. Progress toward center of patch overlapping each preceding track by at least 1/2 the width of roller.

c. Make sufficient passes over entire area to remove roller marks and to produce desired finished surface.

D. Tolerances:

a. Finished surface shall be flush with and match grade, slope, and crown of adjacent surface.

b. Tolerance: Surface smoothness shall not deviate more than plus 1/4 inch or minus 0 when a straightedge is laid across patched area between edges of new pavement and surface of old surfacing.

3.7 FIELD QUALITY CONTROL

A. General: Provide services of an approved certified independent testing laboratory to conduct tests.

B. Field Density Tests:

a. Perform tests from cores or sawed samples.

b. Measure with properly operating and calibrated nuclear density gauge.

c. Maximum Density: In accordance with ASTM D2041, using a sample of mix taken prior to compaction from the same location as the density test sample.

C. Testing Frequency:

a. Quality Control Tests:

i. Asphalt Content, Aggregate Gradation: Once per every 500 tons of mix or once every 4 hours, whichever is greater.

ii. Mix Design Properties, Measured Maximum (Rice's) Specific Gravity: Once every 1,000 tons or once every 8 hours, whichever is greater.

b. Density Tests: Once every 500 tons of mix or once every 4 hours, whichever is greater.

END OF SECTION

SECTION 02920 - SODDING

PART 1 GENERAL

1.1 DEFINITIONS

A. Maintenance Period: Begin maintenance immediately after each area is planted (sod) and continue for a period of 8 weeks after all planting under this Section is completed.

B. Satisfactory Stand:

a. Grass or Section of Grass that has:

i. No bare spots larger than 2 square feet.

ii. Not more than 10 percent of total area with bare spots larger than 1 square foot.

iii. Not more than 15 percent of total area with bare spots larger than 6 square inches.

1.2 DELIVERY, STORAGE, AND PROTECTION

A. Sod:

A. Do not harvest if sod is excessively dry or wet to the extent survival may be adversely affected.

B. Harvest and deliver sod only after laying bed is prepared for sodding.

C. Roll or stack to prevent yellowing.

D. Deliver and lay within 24 hours of harvesting.

E. Keep moist and covered to protect from drying from time of harvesting until laid.

1.3 WEATHER RESTRICTIONS

A. Perform Work under favorable weather and soil moisture conditions as determined by accepted local practice.

1.4 SEQUENCING AND SCHEDULING

A. Prepare topsoil as specified in the Contract Documents, before starting Work of this Section.

B. Complete Work under this Section within 10 days following completion of soil

preparation.

C. Notify CITY PROJECT MANAGER at Least 3 Days in Advance of:

a. Each material delivery.

b. Start of planting activity.

D. Planting Season: Those times of year that are normal for such Work as determined by accepted local practice.

1.5 MAINTENANCE SERVICE

A. Contractor: Perform maintenance operations during maintenance period to include:

a. Watering: Keep surface moist.

b. Washouts: Repair by filling with topsoil, and replace sodded areas.

c. Mowing: Mow to 2 inches after grass height reaches 3 inches, and mow to maintain grass height from exceeding 3 1/2 inches.

d. Re-sod unsatisfactory areas or portions thereof immediately at the end of the maintenance period if a satisfactory stand has not been produced, at which time maintenance period shall recommence.

e. Re-sod during next planting season if scheduled end of maintenance period falls after September 15.

PART 2 MATERIALS

2.1 FERTILIZER

A. Commercial, uniform in composition, free-flowing, suitable for application with equipment designed for that purpose. Minimum percentage of plant food by weight.

B. Mix:

a. Nitrogen: Sixteen.

b. Phosphoric Acid: Four.

c. Potash: Eight.

2.2 SOD

A. Unless a particular type of sod is called for, sod shall be Bahia grass.

a. Use Bahia grass where no irrigation system exists.

b. Use St. Augustine Floritam where an irrigation system is in use.

c. Seashore Paspalum sod will be used in areas prone to salt water flooding.

B. Strongly rooted pads, capable of supporting own weight and retaining size and shape when suspended vertically from a firm grasp on upper 10 percent of pad.

a. Grass Height: Normal.

b. Strip Size: Supplier's standard, commercial size rectangles.

c. Soil Thickness: Uniform; 1-inch plus or minus 1/4-inch at time of cutting.

d. Age: Not less than 10 months or more than 30 months.

e. Condition: Healthy, green, moist; free of diseases, nematodes and insects, and of undesirable grassy and broadleaf weeds. Yellow sod, or broken pads, or torn or uneven ends will not be accepted

f. Any netting contained within the sod shall be certified by the manufacturer to be bio-degradable within a period of 3 months from installation.

PART 3 EXECUTION

3.1 PREPARATION

A. Grade Areas to Smooth, Even Surface with Loose, Uniformly Fine Texture:

a. Roll and rake, remove ridges, fill depressions to meet finish grades.

b. Limit such Work to areas to be planted within immediate future.

c. Remove debris, foreign material and stones larger than 1 1/2 inches diameter, and other objects that may interfere with planting and maintenance operations.

B. Moisten prepared areas before planting if soil is dry. Water thoroughly and allow surface to dry off before seeding. Do not create muddy soil.

C. Restore prepared areas to specified condition if eroded or otherwise disturbed after preparation and before planting.

D. Limit preparation to those areas that can be sodded within 72 hours after preparation.

3.2 FERTILIZER

A. Apply evenly over area in accordance with manufacturer's instructions. Mix into top 2 inches of top soil.
B. Application Rate: 20 pounds per 1,000 square feet (1,000 pounds per acre).

3.3 SODDING

A. Do not plant dormant sod, or when soil conditions are unsuitable for proper results.

B. Pre-wet the area prior to placing sod. Lay sod to form solid mass with tightly fitted joints; butt ends and sides, do not overlap:

a. Stagger strips to offset joints in adjacent courses.

b. Work from boards to avoid damage to subgrade or sod.

c. Tamp or roll lightly to ensure contact with subgrade; work sifted soil into minor cracks between pieces of sod, remove excess to avoid smothering adjacent grass.

d. Complete sod surface true to finished grade, even, and firm.

C. Fasten sod on slopes to prevent slippage with wooden pins 6 inches long driven through sod into subgrade, until flush with top of sod. Install at sufficiently close intervals to securely hold sod.

D. Water sod with fine spray immediately after planting. During first month, water daily or as required to maintain moist soil to depth of 4 inches.

3.4 FIELD QUALITY CONTROL

A. Eight weeks after sodding is complete and on written notice from Contractor, CITY PROJECT MANAGER will, within 15 days of receipt, determine if the sod has been satisfactorily established.

B. If the sod is not satisfactorily established, Contractor shall replace the sod and repeat the requirements of this Section.

END OF SECTION

DIVISION 3 – CONCRETE

SECTION 03010 - CONCRETE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

A. Provide all labor, materials, necessary equipment and services to complete the concrete work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

B. Including but not necessarily limited to the following:

1. Form work, shoring, bracing and anchorage.

2. Concrete reinforcement and accessories.

3. Cast-in-place concrete. 5.
6. 4. Plugging abandoned pipelines and/or structures in place.

1.03 RELATED WORK

A. Section 02510 - Concrete sidewalk

B. Section 02513 - Asphaltic Concrete Paving - General

C. Section 02515 - Portland Cement Concrete Paving.

D. Section 03300 - Cast-in-Place Concrete.

E. All applicable sections of Division 1, 2, 3 and 4.

1.04 QUALITY ASSURANCE

A. All work shall be in accordance with ACI 301, latest edition, a copy of which shall be maintained on site.

B. Requirements of Regulatory Agencies: perform work in accordance with local building and other applicable codes.

C. Installation: Performed only by skilled laborers with satisfactory record of performance on completed projects of comparable size and quality.

D. Inspection and Testing:

1. Test Cylinders - As per ASTM C-39.

a. Minimum of three (3) concrete test cylinder shall be taken for every 75 or less cubic yards of concrete placed each day.

b. Minimum of one (1) slump test shall be taken during any cold weather concreting, and be cured on job site under same conditions as the concrete it represents.

2. Slump Test - As per ASTM C-143.

a. Minimum of one (1) slump test shall be taken for each set of test cylinders taken.

1.05 SUBMITTALS

A. Test Reports: Reports of concrete compression, yield, air content and slump tests.

B. Certificates:

1. Manufacturer's certification that materials meet specification requirements.

2. Material content per cubic yards of each class of concrete furnished.

a. Dry weights of cement.
b. Saturated surface-dried weights of fine and coarse aggregate.
c. Quantities, type, and name of all mixtures.
d. Weight of water.

3. Ready-mix delivery tickets as per ASTM C-94.

C. Shop Drawings:

1. Show sizes and dimensions for fabrication and placing of reinforcing steel and bar supports.

2. Indicate reinforcement sizes, spaces, locations, and quantities or reinforcing steel, and wire fabric, bending and cutting schedules, splicing and supporting and spacing devices.

3. Indicate formwork dimensioning, materials, arrangement of joints and ties.

4. Shop drawings shall be prepared under seal of a Professional Structural Engineer, registered in the State of Florida.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver reinforcement to project site in bundles marked with metal tags indicating bar size and length.

B. Handle and store materials to prevent contamination.

1.07 JOB CONDITIONS

A. Allowable concrete temperatures:
   1. Hot weather: Maximum 90 degrees F as per ASTM C-94.

B. Do not place concrete during rain unless protection is provided.

PART 2 - PRODUCTS

2.01 FORM MATERIALS

A. Materials shall conform to ACI 301, latest edition.

B. Plywood forms: Douglas Fir Species, solid one side, form grade, sound undamaged sheets.

C. Lumber: Southern Pine Species, No. 2 Grade, with grade stamp clearly visible.

D. Form Ties: Removable, snap-off metal, of fixed and adjustable length, cone ends.

E. Tubular Column Type: Round, spirally wound laminated fiber material, clearly visible.

2.02 REINFORCING STEEL

A. Reinforcing steel shall conform to ASTM A615, 60 ksi yield grade billet steel reformed bars; uncoated finish.

B. Welded steel wire fabric shall conform to ANSI/ASTM A185, plain type; coiled rolls, uncoated finish.

2.03 CONCRETE MATERIALS

A. Cement: shall conform to ASTM C150, normal Type II Portland, gray color.

B. Fine and coarse aggregate shall conform to ASTM C33.

C. Water: clean and not detrimental to concrete.

2.04 ADMIXTURES

A. Air Entraining: ASTM C-260

B. Chemical: Type (as required) ASTM C-494.

C. Fly Ash and Pozzolans: ASTM C-618

D. Color - Conditioned Concrete: ASTM C-494 and ASTM C-979

2.05 ACCESSORIES

A. Non-shrink grout: pre-mixed compound with non-metallic aggregate, cement, water reducing and plasticizing agents; capable of minimum compressive strength of 3500 psi.

B. Construction joints: locate and install construction joints, which are not shown on drawings, so as not to impair strength and appearance of the structure, as acceptable to the ENGINEER. Place construction joints perpendicular to the main reinforcement, continue reinforcement across construction joints.

C. Expansion joints: shall be a minimum of 3/4-inch thick asphalt impregnated fiberboard as per ASTM D-1751.

D. Form release agent shall be a colorless material, which will not stain concrete, absorb moisture or impair natural bonding or color characteristics of coating intended for use on concrete.

E. Water shall be clear and potable.

2.06 CURING MATERIALS

A. Water shall be clean and potable.

B. Absorptive mat shall be burlap fabric of 9 oz./sq. yd. clean, roll goods complying with AASHTO M182, Class 3.

C. Membrane curing compound shall conform to ASTM C309.

D. Clear Sealer: "Clear Bond" as manufactured by Guardian Chemical Co., Dayton Day-Chem Cure-W (J-9-A) or approved equal.

E. Color curing compound shall be liquid membrane-forming conforming to ASTM C 309 two-component Lithochrome Colorwax by L.M. Scofield Company, or approved equal, color to match admixture for color-conditioned concrete.

2.07 CONCRETE MIX

A. Mix concrete in accordance with ASTM C94.

B. Concrete:

1. Compressive strength (28 days): 3000 psi.

2. Slump: 4(±) 1 inch.

C. Concrete / Flowable fill for grouting and plugging:
   1. Compressive strength (28 days) 2000 psi.

   2. Slump: as required to grout and plug.

PART 3 - EXECUTION

3.01 FORMWORK ERECTION

A. Verify lines, levels, and measurement before proceeding with formwork.

B. Hand trimmed sides and bottom of earth forms; remove loose dirt.

C. Align form joints.

D. Do not apply form release agent where concrete surfaces receive special finishes or applied coatings, which may be affected by agent.

E. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.

3.02 REINFORCING

A. Place, support, and secure reinforcement against displacement.

3.03 PLACING CONCRETE

7. A. Color Conditioned concrete, when batching, shall not be less than one-third of the capacity of the mixing drum (a minimum of four yards for a ten-yard mixer) and will be in full cubic yard increments.

B. Notify ENGINEER minimum 24-hours prior to commencement of concreting operations.

C. Scratch, float, trowel, broom, or belt finish surfaces, as scheduled or indicated on the Drawings.

D. Place 2000 psi concrete for pugging and grouting pipelines and structures in-place as required after proper connection to new service and function of system is complete.

3.04 TOLERANCES

A. Provide Class B tolerance to floor slabs according to ACI 301. Pitch to drains 1/4 inch per foot.

3.05 FINISHES FOR EXPOSED SURFACES

A. Provide exposed surfaces with finishes as called for on the Drawings.

3.06 CONCRETE CURING

A. Curing for standard grey work after finishing, cure concrete by keeping moist for one (1) week after placement. Floors and vertical surfaces may be sprayed with an approved curing compound to retard evaporation of water if spraying is not objectionable because of future finishing requirements. Begin curing operations as soon as concrete has attained its initial set. Keep exposed concrete surface moist for at least one (1) week.

B. Apply a liquid membrane-forming compound, conforming with ASTM C 309, color to match that of the color condition concrete. Apply on flat work immediately after the finishing operation pursuant to the manufacturer's recommendations.

3.05 MEASUREMENT AND PAYMENT

A. No separate measurement and payment is provided for work covered by this Section. All costs in connection with concrete work shall be included in the bid price of any item in the bid schedule for which concrete products, materials, or appurtenances are required.

END OF SECTION

SECTION 03100 – CONCRETE FORMWORK

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

A. Formwork for Cast-In-Place Concrete, with shoring, bracing, and anchorage.

B. Openings for other affected work.

C. Form accessories.

D. Stripping forms.

1.03 RELATED WORK

A. Section 03010 - Concrete.

B. Section 03300 - Cast-In-Place Concrete.

1.04 SYSTEM DESCRIPTION

A. Design, engineer and construct formwork, shoring and bracing to meet design code requirements, so that resultant concrete conforms to required shapes, lines, and dimensions.

1.05 QUALITY ASSURANCE

A. Construct and erect concrete formwork in accordance with ACI 301 and 347.

1.06 SUBMITTALS

A. Indicate pertinent dimensions, materials, and arrangement of joints and ties.

B. Prepare shop drawings under seal of Professional Structural Engineer registered in the State of Florida.

C. Manufacturers certification that materials meet specification requirements.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials in accordance with manufacturers recommendations.

B. Deliver form materials in manufacturer's packaging with installation instructions.

C. Store off ground in ventilated and protected area to prevent deterioration from moisture or damage.

D. Remove packaging from void forms.

PART 2 PRODUCTS

2.01 FORM MATERIALS

A. Plywood: Douglas Fir Species; medium density overlaid one side grade; sound, undamaged sheets with straight edges.

B. Lumber: Southern Pine Species; No. 2 grade; with grade stamp clearly visible.

C. Tubular Column: Round, of spirally wound laminated fiber type; surface treated with release agent; of size required.

2.02 FORMWORK ACCESSORIES

A. Form Ties: Snap-off metal of adjustable length; cone type; 1 1/2 inch break back dimension; free of defects that will leave holes no larger than 1-1/4 inches diameter in concrete surface.

B. Form Release Agent: Colorless material which will not stain concrete, absorb moisture, or impair natural bonding in color characteristics of coating intended for use on concrete.

C. Fillets for Chamfered Corners: Wood strips or rigid PVC plastic in maximum possible lengths.

D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required; or strength and character to maintain formwork in place while placing concrete.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify lines, levels, and measurements before proceeding with formwork.

3.02 PREPARATION

A. Hand-trim sides and bottoms of earth forms; remove loose dirt prior to placing concrete.

B. Minimize form joints. Symmetrically align joints and make weathertight to prevent leakage of mortar.

C. Arrange and assemble formwork to permit dismantling, stripping, so that concrete is not damaged during its removal.

D. Arrange forms to allow stripping without removal of principal shores, where required to remain in place.

3.03 ERECTION

A. Provide bracing to ensure stability of formwork. Strengthen formwork liable to be overstressed by construction loads.

B. Camber slabs and beams to achieve ACI 301 tolerances.

C. Provide temporary ports in formwork to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain. Close ports with tight fitting panels, flush with inside face of forms, neatly lifted so that joints will be apparent in exposed concrete surfaces.

D. Provide expansion strips on external corners of beams and columns, where exposed.

E. Install void forms. Protect from moisture before concrete placement. Protect from crushing during concrete placement.

F. Construct formwork to maintain tolerances in accordance with ACI 301.

3.04 APPLICATION OF FORM RELEASE AGENT

A. Apply form release agent on formwork in accordance with manufacturer's instructions. Apply prior to placing reinforcing steel, anchoring devices, and embedded items.

B. Do not apply form release agent where concrete surfaces are scheduled to receive special finishes or applied coverings, which may be affected by agent. Soak contact surfaces of untreated forms with clean water. Keep surfaces wet prior to placing concrete.

3.05 INSERTS, EMBEDDED PARTS, AND OPENINGS

A. Provide formed openings where required for work embedded in or passing through concrete.

B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.

C. Install accessories in accordance with manufacturer's instructions, level and plumb. Ensure items are not disturbed during concrete placement.

3.06 FORM REMOVAL

A. Notify ENGINEER prior to removing formwork.

B. Do not remove forms and shoring until concrete has sufficient strength to support its own weight, and construction and design loads which may be imposed upon it. Remove load-supporting forms when concrete has attained 75 percent of required 28-day compressive

strength, provided construction is reshored.

C. Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 degrees F for 24-hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained.

D. Formwork supporting weight of concrete, such as beam soffits, joints, slabs and other structural elements, may not be removed in less than 14 days and until concrete has attained design minimum compressive strength at 28-days. Determine potential compressive strength of in place concrete by testing field-cured specimens representative of concrete location of members.

E. Reshore structural members due to design requirements or construction conditions to permit successive construction.

F. Remove formwork progressively so no unbalanced loads are imposed on structure.

G. Do not damage concrete surfaces during form removal.

H. Store reusable forms for exposed architectural concrete to prevent damage to contact surfaces.

I. Remove formwork in same sequence as concrete placement to achieve similar concrete surface coloration.

3.07 CLEANING

A. Clean forms to remove foreign matter as erection proceeds.

B. Ensure that water and debris drain to exterior through clean-out ports.

3.08 MEASUREMENT AND PAYMENT

A. No separate measurement and payment is provided for work covered by this Section. All costs in connection with concrete formwork shall be included in the bid price of any item in the bid schedule for which concrete formwork is required.

END OF SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 REFERENCES

A. The following is a list of standards which may be referenced in this Section:

a. American Concrete Institute (ACI):

i. 117, Standard Specification for Tolerances for Concrete Construction and Materials.

ii. 211.1, Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.

iii. 301, Standard Specification for Structural Concrete.

iv. 302.1R, Guide For Concrete Floor and Slab Construction.

v. 304R, Guide for Measuring, Mixing, Transporting, and Placing Concrete.

vi. 304.2R, Placing Concrete by Pumping Methods.

vii. 305R, Hot Weather Concreting.

viii. 306.1, Standard Specification for Cold Weather Concreting.

ix. 309R, Guide for Consolidation of Concrete.

x. 318/318R, Building Code Requirements for Structural Concrete.

xi. SP-15, Standard Specification for Structural Concrete.

b. ASTM International (ASTM):

i. C31, Standard Practice for Making and Curing Concrete Test Specimens in the Field.

ii. C33, Standard Specification for Concrete Aggregates.

iii. C39, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.

iv. C88, Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.

v. C94, Standard Specification for Ready-Mixed Concrete.

vi. C143, Standard Test Method for Slump of Hydraulic-Cement Concrete.

vii. C150, Standard Specification for Portland Cement.

viii. C157, Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete.

ix. C192, Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.

x. C231, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.

xi. C260, Standard Specification for Air-Entraining Admixtures for Concrete.

xii. C311, Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland-Cement Concrete.

xiii. C452, Standard Test Method for Potential Expansion of Portland-Cement Mortars Exposed to Sulfate.

xiv. C494, Standard Specification for Chemical Admixtures for Concrete.

xv. C595, Standard Specification for Blended Hydraulic Cements.

xvi. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.

xvii. C1012, Standard Test Method for Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution.

xviii. C1018, Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber-Reinforced Concrete (Using Beam with Third-Point Loading).

xix. C1116, Standard Specification for Fiber-Reinforced Concrete and Shotcrete

xx. C1218 Standard Test Method for Water-Soluble Chloride in Mortar and Concrete

xxi. C1240, Standard Specification for Silica Fume for Use as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar, and Grout.

xxii. D2000, Standard Classification System for Rubber Products in Automotive Applications.

xxiii. D4580, Standard Practice for Measuring Delaminations in Concrete Bridge Decks by Sounding.

xxiv. E329, Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.

c. National Bureau of Standards: Handbook No. 44, Specifications, Tolerances, and Other Technical Requirements for Commercial Weighing and Measuring Devices.

1.2 DEFINITIONS

A. Defective Areas. Surface defects that include honeycomb, rock pockets, indentations greater than 3/16 inch, cracks 0.005 inch wide and larger as well as any crack that leaks for liquid containment basins and below-grade habitable spaces; cracks 0.010 inch wide and larger in nonfluid holding structures spalls, chips, air bubbles greater than 3/4 inch in diameter, pinholes, bug holes, embedded debris, lift lines, sand lines, bleed lines, leakage from form joints, fins and other projections, form popouts, texture irregularities, and stains and other color variations that cannot be removed by cleaning.

B. Exposed Concrete. Concrete surfaces that can be seen inside or outside of structures regardless whether concrete is above water, dry at all times, or can be seen when structure is drained.

C. Hydraulic Structures. Liquid containment basins.

D. New Concrete. Less than 60 days old.

E. Slurry Concrete. Mixture of sand, 3/8-inch minus aggregate, cement, and water for wall construction joints.

1.3 SUBMITTALS

A. Action Submittals:

a. Shop Drawings:

i. Product Data. Admixtures, bonding agent, bond breaker, and patching materials.

ii. Design Data. Concrete mix designs signed by qualified mix designer.

iii. Placement Drawings:

a. Concrete, identifying location of each type of construction joint.

b. Tremie concrete.

iv. Gradation for coarse and fine aggregates, and combined together. List gradings, percent passing through each sieve size.

v. Detailed plan for hot weather placements including curing and protection for concrete placed in ambient temperatures over 80 degrees F.

vi. Concrete repair methods and materials.

B. Informational Submittals:

a. Statements of Qualification:

i. Contractor's resident superintendent for concrete installation.

ii. Mix designer.

iii. Batch plant.

b. Test Reports:

i. Admixtures, test reports showing chemical ingredients and percentage of chloride in each admixture and fly ash.

ii. Source test analysis report for fly ash, including percentage of chloride content.

iii. Statement identifying aggregates reactivity. Determine water soluble chloride in each component of aggregates in accordance with ASTM C1218.

iv. For each trial concrete mix design and signed by a qualified mix designer.

v. Cylinder compressive test results for laboratory concrete mixes.

c. Concrete Delivery Tickets:

i. For each batch of concrete before unloading at Site.

ii. Record of drum revolution counter, type, brand, test certification, Amount of fly ash if used in accordance with ASTM C94, Section 16.

1.4 QUALITY ASSURANCE

A. Qualifications:

a. Mix Designer. Licensed professional engineer registered in the State of Florida.

b. Batch Plant. Currently certified by the National Ready Mixed Concrete Association.

B. Preinstallation Conference:

a. Required Meeting Attendees:

i. Contractor, including pumping, placing and finishing, and curing subcontractors.

ii. Ready-mix producer.

iii. Admixture representative.

iv. Testing and sampling personnel.

v. Engineer.

b. Schedule and conduct prior to incorporation of respective products into Project. Notify Engineer of location and time.

c. Agenda shall include:

i. Admixture types, dosage, performance, and redosing at Site.

ii. Mix designs, test of mixes, and Submittals.

iii. Placement methods, techniques, equipment, consolidation, and form pressures.

iv. Slump and placement time to maintain slump.

v. Finish, curing, and water retention.

vi. Protection procedures for weather conditions.

vii. Other specified requirements requiring coordination.

d. Conference minutes as specified in Section 01200, Project Meetings.

PART 2 PRODUCTS

2.1 MATERIALS

A. Cement. Furnish from one source.

a. Portland Cement Type I or Type II:

i. Meet ASTM C150.

ii. Alkalies: Maximum 0.60 percent.

iii. Tricalcium Aluminate Content of Type I Cement: Maximum 12 percent.

iv. Nonhydraulic Abovegrade Structures: Type I or Type II cement.

v. Hydraulic and Belowgrade Structures and Sewers: Type II cement or combination of Type I mixed with fly ash.

vi. Combine fly ash with cement at batch plant or during production of cement in accordance with ASTM C595, Type IP cement.

B. Aggregates. Furnish from one source.

a. Natural Aggregates:

i. Free from deleterious coatings and substances in accordance with ASTM C33, except as modified herein.

ii. Free of materials and aggregate types causing popouts, discoloration, staining, or other defects on surface of concrete.

b. Nonpotentially Reactive. In accordance with ASTM C33, Appendix XI, Paragraph X1.1.

c. Aggregate Soundness. Test for fine and coarse aggregates in accordance with ASTM C33 and ASTM C88 using sodium sulfate solution.

d. Fine Aggregates:

i. Clean, sharp, natural sand.

ii. ASTM C33.

iii. Materials Passing 200 Sieve: 4 percent maximum.

iv. Limit deleterious substances in accordance with ASTM C33, Table 1 with material finer than 200 sieve limited to 3 percent, coal and lignite limited to 0.5 percent.

e. Coarse Aggregate:

i. Natural gravels, combination of gravels and crushed gravels, crushed stone, or combination of these materials containing no more than 15 percent flat or elongated particles (long dimension more than five times the short dimension).

ii. Materials Passing 200 Sieve: 0.5 percent maximum.

iii. Limit deleterious substances in accordance with ASTM C33, Table 3 for exposed concrete.

C. Admixtures. Furnish from one manufacturer.

a. Characteristics. Compatible with each other and free of chlorides or other corrosive chemicals.

b. Air-Entraining Admixture:

i. ASTM C260, nontoxic after 30 days and contains no chlorides.

ii. Concrete with air-entrainment admixture added shall maintain air percentage as batched, within plus or minus 2 percent for time required for placement into structure.

c. Water-Reducing Admixture, ASTM C494, Type A or Type D.

i. Manufacturers and Products:

a. Master Builders, Inc., Cleveland, OH; Pozzolith or Polyheed.

b. W. R. Grace & Co., Cambridge, MA; WRDA with HYCOL.

c. Euclid Chemical Co., Cleveland, OH; Eucon WR-91.

d. High Range Water Reducing Admixture (Superplasticizer):

i. ASTM C494.

ii. Hold slump of 5 inches or greater for time required for placement.

iii. Furnish type as recommended by manufacturer for allowed temperature ranges.

iv. Type F or G.

v. Manufacturers and Products:

a. Master Builders, Inc., Cleveland, OH; Rheobuild or Polyheed at dosage greater than 10 ounces per 100 pounds of cement.

b. W. R. Grace & Co., Cambridge, MA; Daracem 100.

c. Euclid Chemical Co., Cleveland, OH; Eucon 537.

e. Pozzolan (Fly Ash). Class C or Class F fly ash in accordance with ASTM C618, Table 1 and 2, except as modified herein:

i. Shall not be produced from process that has utilized hazardous or potentially hazardous materials.

ii. Loss on Ignition: Maximum 3 percent.

iii. Water Requirement: Maximum 100 percent of control.

iv. $\frac{CaO(\%) - 5}{FE_2O_3(\%)} : Maximum 1.5$

v. ASTM C618, Table 3, Reactivity with Cement Alkalies, apply when aggregate or portions of aggregate is reactive as specified under Paragraph Nonpotentially Reactive.

vi. ASTM C618, Table 3, Uniformity Requirements, apply when loss on ignition of fly ash furnished exceeds 3 percent.

f. Fly Ash. Maximum 25 percent, minimum 15 percent of total weight of fly ash plus cement.

g. For fly ash not meeting requirements of chemical ratio listed above, furnish the following:

i. Test fly ash in accordance with ASTM C1012.

ii. Furnish test data confirming fly ash in combination with cement used meets strength requirements, is compatible with air-entraining agents and other additives, and provides increased sulfate resistance equivalent to or better than Type II cement.

iii. Conduct tests using proposed fly ash and cement samples together with control samples using Type II cement without fly ash.

D. Water. Clean and potable containing less than 500 ppm of chlorides.

2.2 CONCRETE MIX DESIGN

A. Design. Select and proportion ingredients using trial batches; sample, cure and test concrete mix through approved independent testing laboratory in accordance with ACI 211.1.

a. Concrete Compressive Strength, F'c:

i. 4,000 psi at 28 days, unless otherwise shown, except 3,000 psi at 28 days for secondary concrete elements such as curbs, sidewalks, and pipe/conduit encasements.

ii. Design lab-cured trial mix cylinders.

iii. Use additional cement or cement plus fly ash above minimum specified if required to meet average compressive strength, F'cr.

iv. Use F'cr as basis for selection of concrete proportions as set forth in ACI 301.

v. F'cr: Equal to F'c plus 1,200 when data are not available to establish standard deviation.

b. Concrete Fill:

i. Design for 2,500 psi at 28 days using 3/4-inch aggregate, 4-inch maximum slump and 0.46 maximum water-cement ratio.

ii. Use water-reducing admixture.

B. Proportions:

a. Design mix to meet aesthetic and structural concrete requirements.

b. In accordance with ACI 211.1, unless specified otherwise.

c. Unless specifically stated otherwise, water-cement ratio (or water-cement plus fly ash ratio) shall control amount of total water added to concrete as follows:

Water-Cement Ratio		
Coarse Aggregate Size	Maximum W/C Ratio w/ Superplasticizer	Maximum W/C Ratio w/o Superplasticizer
1-1/2”	0.40	0.44
1”	0.40	0.44
3/4”	0.40	0.44

d. Minimum Cement Content (or Combined Cement Plus Fly Ash Content When Fly Ash is Used):

i. 517 pounds per cubic yard for concrete with 1-1/2-inch maximum size aggregate.

ii. 540 pounds per cubic yard for 1-inch maximum size aggregate.

iii. 564 pounds per cubic yard for 3/4-inch maximum size aggregate.

iv. Increase cement content or combined cement plus fly ash content, as required to meet strength requirements and water-cement ratio.

C. Admixtures:

a. Air Content. 4 to 6 percent when tested in accordance with ASTM C231; 3 percent maximum for interior slabs where heavy-duty concrete floor finish is required.

b. Fly Ash. Maximum 25 percent, minimum 15 percent of total weight of fly ash plus cement.

c. Water Reducers. Use in all concrete.

d. High Range Water Reducers (Superplastizicers). Use at Contractor’s option. Control slump and workability to at least 4-1/2-inch slump at

discharge into forms by adjusting high range water reducer at batch plant.

D. Slump Range at Site:

a. 4-1/2 inches minimum, 8 inches maximum for concrete with a high range water reducing admixture.

b. 3 inches minimum and 5 inches maximum for concrete without high range water reducing admixture.

E. Combined Aggregate Gradation:

a. Structures. Select one of the gradations shown in the following table.

b. Combined Gradation Limits. Limits shown are for coarse aggregates and fine aggregates mixed together (combined).

Sieve Sizes	Combined Gradation Percentage Passing		
	1-1/2" Max.	**1" Max.**	**3/4" Max.**
2"	- 100	-	-
1-1/2"	95 - 100	- 100	-
1"	65 - 85	90 - 100	- 100

Sieve Sizes	Combined Gradation Percentage Passing		
	1-1/2" Max.	**1" Max.**	**3/4" Max.**
3/4"	55 - 75	70 - 90	92 – 100
1/2"	-		68 – 86
3/8"	40 - 55	45 - 65	57 – 74
No. 4	30 - 45	31 - 47	38 – 57
No. 8	23 - 38	23 - 40	28 – 46
No. 16	16 - 30	17 - 35	20 – 36
No. 30	10 - 20	10 - 23	14 – 25
No. 50	4 - 10	2 - 10	5 – 14
No. 100	0 - 3	0 - 3	0 – 5
No. 200	0 - 2	0 - 2	0 – 2

F. Tremie Concrete:

a. Minimum cement content of 658 pounds per cubic yard.

b. Use high range water reducing admixture (superplasticizers) admixture in accordance with ASTM C494, Type F or Type G.

c. Fine Aggregate Range: 40 to 50 percent of total aggregates by weight.

d. Use natural round gravel if available in Project area.

e. Proportion mix for design strength and slump range of 6 to 9 inches with maximum water-cement ratio.

f. Use anti-washout admixture in accordance with manufacturer's recommendations.

2.3 CONCRETE MIXING

A. General. In accordance with ACI 304R.

B. Concrete Mix Temperatures. As shown below for various stages of mixing and placing:

CONCRETE TEMPERATURES				
	Concrete Member Size, Minimum Dimension			
Ambient Air Temp.	**<12"**	**12"-36"**	**36"-72"**	**>72"**
Minimum concrete temperature as mixed for indicated air temperature:				
Above 30 deg .F	60 deg. F	55 deg. F	50 deg. F	45 deg. F
0 to 30 deg. F	65 deg. F	60 deg. F	55 deg. F	50 deg. F
Below 0 deg. F	70 deg. F	65 deg. F	60 deg. F	55 deg. F

CONCRETE TEMPERATURES				
	Concrete Member Size, Minimum Dimension			
Ambient Air Temp.	**<12"**	**12"-36"**	**36"-72"**	**>72"**
Maximum allowable gradual temperature drop in first 24 hours after curing period and after end of protection:				
–	50 deg. F	40 deg. F	30 deg. F	20 deg. F

C. Truck Mixers:

a. Equip with electrically actuated counters to readily verify number of revolutions of drum or blades.

b. Counter:

i. Resettable, recording type, mounted in driver's cab.

ii. Actuated at time of starting mixers at mixing speeds.

c. Truck mixer operation shall furnish concrete batch as discharged that is homogeneous with respect to consistency, mix, and grading.

d. If slump tests taken at approximately 1/4 and 3/4 points of load during

discharge give slumps differing by more than 2 inches when specified, slump is more than 4 inches, discontinue use of truck mixer unless causing condition is corrected and satisfactory performance is verified by additional slump tests.

e. Before attempting to reuse unit, check mechanical details of mixer, such as water measuring, and discharge apparatus, condition of blades, speed of rotation, general mechanical condition of unit, admixture dispensing equipment, and clearance of drum.

f. Do not use nonagitating or combination truck and trailer equipment for transporting ready-mixed concrete.

g. Concrete Volume in Truck:

i. Limit to 63 percent of total volume capacity in accordance with ASTM C94 when truck mixed.

ii. Limit to 80 percent of total volume capacity when central mixed.

h. Mix each batch of concrete in truck mixer for minimum 70 revolutions of drum or blades at rate of rotation designated by equipment manufacturer.

i. Perform additional mixing, if required, at speed designated by equipment manufacturer as agitating speed.

j. Place materials, including mixing water, in mixer drum before actuating revolution counter for determining number of mixing revolutions.

D. Aggregates. Thoroughly and uniformly wash before use.

E. Admixtures:

a. Air-Entraining Admixture. Add at plant through manufacturer-approved dispensing equipment.

b. Water Reducers. Add prior to addition of high range water reducing admixture (superplasticizers).

c. High range water reducing admixture (superplasticizers) and Air-Entraining Admixtures:

i. Add at concrete plant only through equipment furnished or approved by admixture manufacturer.

ii. Accomplish variations in slump, working time, and air content for flowable mixes by increasing or reducing high range water reducing admixture (superplasticizers) dose or air-entraining admixture dose at ready-mix plant only.

iii. Equipment shall provide for easy and quick visual verification of admixture amount used for each dose.

iv. Add discharge amount to each load of concrete into separate dispensing container, verify amount is correct, and add to concrete.

v. Additional dosage of high range water reducing admixture (superplasticizers) may be added in field using manufacturer-approved dispensing when unexpected delays cause too great of slump loss.

2.4 SOURCE QUALITY CONTROL

A. Cement. Test for total chloride content.

B. Fly Ash. Test in accordance with ASTM C311.

C. Batch Plant Inspection. Engineer shall have access to and have right to inspect batch plants, cement mills, and supply facilities of suppliers, manufacturers, and Subcontractors, providing products included in these Specifications.

a. Weighing Scales. Tested and certified within tolerances set forth in the National Bureau of Standards Handbook No. 44.

b. Batch Plant Equipment. Either semiautomatic or fully automatic in accordance with ASTM C94.

PART 3 EXECUTION

3.1 PLACING CONCRETE

A. Preparation. Meet requirements and recommendations of ACI 304R and ACI 301, except as modified herein.

B. Inspection. Notify Engineer at least 1 full working day in advance before starting to place concrete.

C. Discharge Time:

a. As determined by set time, do not exceed 1-1/2 hours after adding cement to water unless special approved time delay admixtures are used. Coordinate time delay admixture information with manufacturer and Engineer prior to placing concrete.

b. Adjust slump or air content at Site by adding admixtures for particular load when approved by Engineer. Then, adjust plant dosage for remainder of placement. Additional dosage at Site shall be through approved dispenser supplied by admixture manufacturer.

c. Maintain required slump throughout time of concrete placement and consolidation. Discontinue use of high range water reducing admixture (superplasticizers) and provide new mix design if it fails to maintain slump between 4 to 8 inches and produce good consolidation for the length of time required. Redesign mix adjusting set control admixtures to maintain setting time in range required.

D. Placement into Formwork:

a. Before depositing concrete, remove debris from space to be occupied by concrete.

b. Prior to placement of concrete, dampen fill under slabs on ground, dampen sand where vapor retarder is specified, and dampen wood forms.

c. Reinforcement, Secure in position before placing concrete.

d. Place concrete as soon as possible after leaving mixer, without segregation or loss of ingredients, without splashing forms or steel above, and in layers not over 1.5 feet deep, except for slabs which shall be placed full depth. Place and consolidate successive layers prior to initial set of first layer to prevent cold joints.

e. Use placement devices, for example, chutes, pouring spouts, and pumps.

f. Vertical Free Fall Drop to Final Placement: 5 feet in forms 8 inches or less wide and 8 feet in forms wider than 8 inches, except as specified.

i. For placements where drops are greater than specified, use placement device such that free fall below placement device conforms to required value.

ii. Limit free fall to prevent segregation caused by aggregates hitting reinforcing steel.

g. Do not use aluminum conveying devices.

h. Provide sufficient illumination in the interior of forms so concrete deposition is visible, permitting confirmation of consolidation quality.

i. Joints in Footings and Slabs:

i. Ensure space beneath plastic water stop completely fills with concrete.

ii. During concrete placement, make visual inspection of entire water stop area.

iii. Limit concrete placement to elevation of water stop in first pass, vibrate concrete under water stop, lift water stop to confirm full consolidation without voids, place remaining concrete to full height of slab.

iv. Apply procedure to full length of water stops.

j. If reinforcement is in direct sunlight or is more than 20 degrees F higher in temperature than concrete temperature before placement, wet reinforcement with water fog spray before placing concrete to cool reinforcement.

k. Trowel and round off top exposed edges of walls with 1/4-inch radius steel edging tool.

E. Conveyor Belts and Chutes:

a. Design and arrange ends of chutes, hopper gates, and other points of concrete discharge throughout conveying, hoisting, and placing system for concrete to pass without becoming segregated.

b. Do not use chutes longer than 50 feet.

c. Minimum Slopes of Chutes, angled to allow concrete to readily flow without segregation.

d. Conveyor Belts:

i. Approved by Engineer.

ii. Wipe clean with device that does not allow mortar to adhere to belt.

iii. Cover conveyor belts and chutes.

F. Retempering. Not permitted for concrete where cement has partially hydrated.

G. Pumping of Concrete:

a. Provide standby pump, conveyor system, crane and concrete bucket, or other system onsite during pumping, for adequate redundancy to assure completion of concrete placement without cold joints in case of primary placing equipment breakdown.

b. Minimum Pump Hose (Conduit) Diameter. 4 inches.

c. Replace pumping equipment and hoses (conduits) that are not functioning properly.

H. Maximum Size of Concrete Placements:

a. Limit size of each placement to allow for strength gain and volume change due to shrinkage.

b. Locate expansion, control, contraction, and construction joints where shown. When expansion or control joints are not shown, provide construction joints at maximum spacing of 40 feet. When expansion or control joint spacing exceeds 60 feet, provide intermediate construction joints at maximum spacing of 40 feet. Uniformly space construction joints. Vertical construction joint shall not be greater than 20 feet from wall corners or intersections.

c. Consider beams, girders, brackets, column capitals, and haunches as part of floor or roof system and place monolithically with floor or roof system.

d. Should placement sequence result in cold joint located below finished water surface, install water stop in joint.

I. Minimum Time Between Adjacent Placements:

a. Construction Joints. 14 days (7 days wet cure and 7 days dry cure).

b. Control Joints. 6 days.

c. Expansion Joints/Contraction Joints. 1 day.

d. At least 2 hours shall elapse after depositing concrete in long columns and walls thicker than 8 inches before depositing concrete in beams, girders, or slabs supported thereon.

e. For columns and walls 10 feet in height or less, wait at least 45 minutes prior to depositing concrete in beams, girders, brackets, column capitals, or slabs supported thereon.

J. Removal of Water. Unless tremie method for placing concrete is specified, remove water from space to be occupied by concrete.

K. Consolidation and Visual Observation:

a. Consolidate concrete with internal vibrators with minimum frequency of 8,000 cycles per minute and amplitude as required to consolidate concrete in section being placed.

b. Provide at least one standby vibrator in operable condition at placement Site prior to placing concrete.

c. Consolidation Equipment and Methods: ACI 309R.

d. Provide sufficient windows in forms or limit form height to allow for concrete

placement through windows and for visual observation of concrete.

e. Vibration consolidation shall not exceed distance of 3 feet from point of placement.

f. Vibrate concrete in vicinity of joints to obtain impervious concrete.

L. Hot Weather:

a. Prepare ingredients, mix, place, cure, and protect in accordance with ACI 305R.

b. Placement frequency shall be such that lift lines will not be visible in exposed concrete finishes.

c. Maintain concrete temperature below 90 degrees F at time of placement, or furnish test data or provide other proof that admixtures and mix ingredients do not produce flash set plastic shrinkage, or cracking due to heat of hydration. Cool ingredients before mixing to maintain fresh concrete temperatures as specified or less.

d. Provide for windbreaks, shading, fog spraying, sprinkling, ice, wet cover, or other means as necessary to maintain concrete at or below specified temperature.

e. Prevent differential temperature between reinforcing steel and concrete.

f. Evaporation Retardant: As specified in Section 03370, Concrete Curing.

3.2 PLACING TREMIE CONCRETE SEALS

A. Place concrete when water level inside area to be filled with concrete is equal to groundwater elevation outside.

B. Maintain relation of water levels until concrete design strength is obtained.

3.3 CONCREE BONDING

A. Horizontal Construction Joints in Reinforced Concrete Walls:

a. Thoroughly clean and saturate surface of joint with water.

b. Limit slurry concrete placement to 2-inch maximum thickness, 1-inch minimum thickness.

c. Use positive measuring device such as bucket or other device that will contain only enough slurry concrete for depositing in visually measurable area of wall to ensure that portion of form receives appropriate amount of slurry concrete to satisfy placement thickness requirements.

d. Do not deposit slurry concrete from pump hoses or large concrete buckets, unless specified placement thickness can be maintained and verified through inspection windows close to joint.

e. Limit concrete placed immediately on top of slurry concrete to 12 inches thick. Thoroughly vibrate to mix concrete and slurry concrete together.

B. To Existing Concrete:

a. Thoroughly clean and mechanically roughen existing concrete surfaces to roughness profile of 1/4 inch.

b. Saturate surface with water for 24 hours prior to placing new concrete.

3.4 CONSTRUCTION JOINTS

A. As specified in Section 03251, Concrete Joints.

3.5 REPAIRING CONCRETE

A. General:

a. Inject cracks that leak with crack repair epoxy.

b. Obtain quantities of repair material and manufacturer's detailed instructions for use to provide repair with finish to match adjacent surface or apply sufficient repair material adjacent to repair to blend finish appearance.

c. Repair of concrete shall provide structurally sound surface finish, uniform in appearance or upgrade finish by other means until acceptable to Engineer.

B. Tie Holes:

a. Fill with nonshrink grout as specified in Section 03600, Grout.

b. Match color of adjacent concrete and demonstrate on mockup panels first.

c. Compact grout using steel hammer and steel tool to drive grout to high density. Cure grout with water.

C. Alternate Form Ties; Through-Bolts:

a. Mechanically roughen entire interior surface of through hole. Epoxy coat roughened surface and drive elastic vinyl plug to half depth. Dry pack entire hole from both sides of plug with nonshrink grout, as specified in Section 03600, Grout. Use only enough water to dry pack grout. Dry pack while epoxy is still tacky. If epoxy has dried, remove epoxy by mechanical means and reapply new epoxy.

b. Compact grout using steel hammer and steel tool to drive grout to high density. Cure grout with water.

D. Exposed Metal Objects:

a. Metal objects not intended to be exposed in as-built condition of structure including wire, nails, and bolts, shall be removed by chipping back concrete to depth of 1 inch and then cutting or removing metal object.
b. Repair area of chipped-out concrete per requirements of Section 03720, Vertical and Overhead Concrete Repair Systems.

E. Blockouts at Pipes or Other Penetrations:

a. Install per details shown on Drawings or submit proposed blockouts for review.

b. Use nonshrink, nonmetallic grout.

3.6 CONCRETE WALL FINISHED

A. Type W-1 (Ordinary Wall Finish):

a. Patch tie holes.

b. Knock off projections.

c. Patch defective areas.

B. Type W-2 (Smooth Wall Finish):

a. Patch tie holes.

b. Grind off projections, fins, and rough spots.

c. Patch defective areas and repair rough spots resulting from form release agent failure or other reasons to provide smooth uniform appearance.

C. Type W-4 (Finish for Cementitious Coatings):

a. Patch tie holes.

b. Grind off projections, fins, and rough spots.

c. Patch and repair defective areas as specified for Type W-2.

D. Type W-5 (Finish for Painting):

a. Patch tie holes.

b. Grind off projections, fins, and rough spots.

c. Patch and repair defective areas as specified for Type W-2.

d. Leave surface ready for painting as specified in Section 09900, Painting and Protective Coatings.

E. Type W-7 (Smooth Rubbed Wall Finish):

a. Only water curing will be permitted on walls being rubbed.

b. Perform rubbing while green concrete can be physically worked and smoothed without adding other materials, if structurally possible, the day following placement. Finish no later than 3 days after placement has been completed.

c. Remove forms at such a rate that all finishing, form tie filling, fin removal, and patching can be completed on same day forms are removed while curing wall.

d. After pointings have set sufficiently to permit working on surface, thoroughly saturate entire surface with water for period of 3 hours and rub until uniform surface is obtained.

e. Rub either by hand with carborundum stone of medium-coarse grade or abrasive of equal quality, or mechanically operated carborundum stone.

f. Mechanically operated carborundum stones shall be approved by Engineer before concrete finishing.

g. No cement grout, other than cement paste drawn from the concrete itself by the rubbing process shall be used.

h. Finish paste formed by rubbing by either brushing or floating as follows:

i. Brushing:

a. Carefully strike with clean brush.

b. Brush in long direction of surface being finished.

i. Floating:

a. Spread uniformly over surface and allow to reset.

b. Finish by floating with canvas, carpet face, or cork float, or rub down with dry burlap.

j. Continue water curing of wall during finishing operation in areas not being rubbed.

k. Move water curing onto rubbed areas as soon as water will not erode rubbed surface.

F. Type W-8 (Rubbed Wall Finish):

a. Meet requirements for Type W-7, except allow paste obtained from rubbing to set at least 24 hours.

b. After thoroughly saturating with water, coat surface with mixture of 85 percent cement and 15 percent lime with sufficient water to give creamy consistency. Demonstrate on sample panel prior to production finishing.

c. Rub this mixture into surface with coarse carborundum stone and brush with damp brush.

d. Brush in long direction of surface being finished.

e. Latex bonding admixture may be used. Consult with Euclid Chemical Co., Cleveland, OH or Master Builders Co., Cleveland, OH.

G. Type W-9 (Grout Cleaned Finish):

a. Meet requirements for Type W-7, except that finish must be accomplished within 7 days of placement.

b. Grout. Mixed with 1 part Portland cement and 1-1/2 parts fine sand and bonding agent to produce grout with consistency of thick paint. White Portland cement shall be substituted for part of gray Portland cement in order to produce color matching color of surrounding concrete, as determined by trial patch.

c. Wet surface of concrete sufficiently to prevent absorption of water from grout and apply grout uniformly with brushes or spray gun.

d. Immediately after applying grout, scrub surface vigorously with cork float or stone to coat surface and fill air bubbles and holes.

e. While grout is still plastic, remove excess grout by working surface with rubber float, burlap, or other means. After surface whitens from drying (about 30 minutes at 70 degrees F), rub vigorously with clean burlap. Continue to water cure wall until curing period of 7 days is complete.

f. Latex bonding admixture may be used.

H. W-10 (Fractured Fin Finish):

a. Form exterior surface of walls with approved form liner.

b. Use stainless steel form ties and place at valleys.

c. Patch form tie holes.

d. Achieve final texture by light sandblast and then breaking off tips of ridge with light bushhammering, or other approved process.

e. Same person starting bushhammering shall complete process for any given structure and match approved mockup panel.

I. Type W-11 (Abrasive Blast - Sandblast Finish):

a. Intent of this procedure is to remove surface skin to depth no more than 1/16 inch, and expose only fine aggregate and air holes near surface, thus producing uniform texture.

b. Perform sandblasting on building or on concrete surfaces in same area of view at same time and obtain uniformity of appearance.

c. Same person shall accomplish sandblasting on one structure and on concrete in same area.

d. Perform sandblasting to match approved mockup panel.

e. Abrasive. Use clean silica sand, free of foreign materials, and supplied in sealed sacks.

f. Blast surface with 100 psi air pressure at rate of 2 to 3 square feet per minute with nozzle held approximately 2 feet from surface and perpendicular thereto.

3.7 CONCRETE SLAB FINISHED

A. General:

a. Finish slab concrete per the requirements of ACI 302.1R.

b. Use manual screeds, vibrating screeds, or roller compacting screeds to place concrete level and smooth.

c. Do not use “jitterbugs” or other special tools designed for purpose of forcing coarse aggregate away from surface and allowing layer of mortar, which will be weak and cause surface cracks or delamination, to accumulate.

d. Do not dust surfaces with dry materials.

e. Use evaporation retardant.

f. Round off edges of slabs with steel edging tool, except where cove finish is shown. Steel edging tool radius shall be 1/4 inch for slabs subject to wheeled traffic.

B. Type S-1 (Steel Troweled Finish):

a. Finish by screeding and floating with straightedges to bring surfaces to required finish elevation. Use evaporation retardant.

b. While concrete is still green, but sufficiently hardened to bear a person's weight without deep imprint, wood float to true, even plane with no coarse aggregate visible.

c. Use sufficient pressure on wood floats to bring moisture to surface.

d. After surface moisture has disappeared, hand trowel concrete to produce smooth, impervious surface, free from trowel marks.

e. Burnish surface with an additional troweling. Final troweling shall produce ringing sound from trowel.

f. Do not use dry cement or additional water during troweling, nor will excessive troweling be permitted.

g. Power Finishing:

i. Approved power machine may be used in lieu of hand finishing in accordance with directions of machine manufacturer.

ii. Do not use power machine when concrete has not attained necessary set to allow finishing without introducing high and low spots in slab.

iii. Do first steel troweling for slab S-1 finish by hand.

C. Type S-2 (Wood Float Finish):

a. Finish slab to receive fill and mortar setting bed by screeding with straightedges to bring surface to required finish plane.

b. Wood float finish to compact and seal surface.

c. Remove laitance and leave surface clean.

d. Coordinate with other finish procedures.

D. Type S-4 (Exposed Aggregate Finish):

a. Embed single layer of selected aggregates at surface of concrete slab immediately after it has been placed, screeded, and smoothed.

b. Embed aggregates by tamping with wood float, darby, or rolling device.

c. Accomplish exposure of selected aggregates by removing surface matrix by washing with water and brushing with stiff plastic bristled brush as soon as concrete has set sufficiently to support weight of a person.

d. Exposure. No greater than 1/3 the average diameter of aggregate, nor less than 1/4.

e. Next day acid wash until there is no noticeable cement film on aggregate exposed.

f. Apply clear sealer per manufacturer's recommendations.

E. Type S-5 (Broomed Finish):

a. Finish as specified for Type S-1 floor finish, except omit final troweling and finish surface by drawing fine-hair broom lightly across surface.

b. Broom in same direction and parallel to expansion joints, or, in the case of inclined slabs, perpendicular to slope, except for round roof slab, broom surface in radial direction.

F. Type S-6 (Sidewalk Finish):

a. Slope walks down 1/4 inch per foot away from structures, unless otherwise shown.

b. Strike off surface by means of strike board and float with wood or cork float to true plane, then flat steel trowel before brooming.

c. Broom surface at right angles to direction of traffic or as shown.

d. Lay out sidewalk surfaces in blocks, as shown or as directed by Engineer, with grooving tool.

G. Concrete Curbs:

a. Float top surface of curb smooth, and finish all discontinuous edges with steel edger.

b. After concrete has taken its initial set, remove front form and give exposed vertical surface an ordinary wall finish, Type W-1.

3.8 CONCRETE SLAB TOLERENCES

A. Slab Tolerances:

a. Exposed Slab Surfaces. Comprise of flat planes as required within tolerances specified.

b. Slab Finish Tolerances and Slope Tolerances. Crowns on floor surface not too high as to prevent 10-foot straightedge from resting on neither end blocks, nor low spots that allow block of twice the tolerance in thickness to pass under supported 10-foot straightedge.

c. Slab Type S-A. Steel gauge block 5/16 inch thick.

d. Slab Type S-B. Steel gauge block 1/8 inch thick.

e. Slab Type S-A and S-B: Finish Slab Elevation. Slope slabs to floor drain and gutter, and shall adequately drain regardless of tolerances.

f. Thickness. Maximum 1/4 inch minus or 1/2 inch plus from thickness shown. Where thickness tolerance will not affect slope, drainage, or slab elevation, thickness tolerance may exceed 1/2 inch plus.

B. Thickness. Maximum 1/4 inch minus or 1/2 inch plus from thickness shown. Where thickness tolerance will not affect slope, drainage, or slab elevation, thickness tolerance may exceed 1/2 inch plus.

3.9 BEAM AND COLUMN FINISHED

A. General. Inject cracks with crack repair epoxy. Patch and repair defective areas.

B. Match Wall Type:

a. Repair rock pockets.

b. Fill air voids.

3.10 BACKFILL AGAINST WALLS

A. Do not backfill against walls until concrete has obtained specified 28-day compressive strength.

B. Place backfill simultaneously on both sides of wall, where required, to prevent differential pressures.

3.11 FIELD QUALITY CONTROL

A. General:

a. Provide adequate facilities for safe storage and proper curing of concrete test cylinders onsite for first 24 hours, and for additional time as may be

required before transporting to test lab.

b. Provide concrete for testing of slump, air content, and for making cylinders from the point of discharge into forms. When concrete is pumped, Samples used shall be taken from discharge end of pump hose.

c. Evaluation will be in accordance with ACI 301 and Specifications.

d. Specimens shall be made, cured, and tested in accordance with ASTM C31 and ASTM C39.

e. Frequency of testing may be changed at discretion of Engineer.

f. Pumped Concrete. Take concrete samples for slump (ASTM C143) and test cylinders (ASTM C31 and C39) and shrinkage specimens (ASTM C157) at placement (discharge) end of line.

g. Reject concrete represented by cylinders failing to meet strength and air content specified.

B. Tolerances:

a. Walls. Measure and inspect walls for compliance with tolerances specified in Section 03100, Concrete Formwork.

b. Slab Finish Tolerances and Slope Tolerances:

i. Floor flatness measurements shall be made day after floor is finished and before shoring is removed to eliminate effects of shrinkage, curing, and deflection.

ii. Support 10-foot long straightedge at each end with steel gauge blocks of thicknesses equal to specified tolerance.

iii. Compliance with designated limits in four of five consecutive measurements is satisfactory, unless defective conditions are observed.

C. Water Leakage Tests:

a. Purpose. Determine integrity and watertightness of finished exterior and interior water holding concrete surfaces.

b. Potable Water Supply Reservoirs. Clean and sterilize prior to conducting test as specified in Section 02519, Disinfection of Water Systems.

c. Water-Holding Structures:

i. Perform leakage tests after concrete structure is complete and

capable of resisting hydrostatic pressure of water test. Concrete shall have achieved its full design strength.

ii. Perform leakage test before backfill, brick facing, grout topping slab, coatings, or other work that will cover concrete surfaces has begun.

iii. Install temporary bulkheads, cofferdams, and pipe blind flanges, and close valves. Inspect each to see that it provides complete seal.

iv. Fill with water to test level shown, or maximum liquid level if no test level is given. Maintain this level for 72 hours prior to start of test to allow water absorption, structural deflection, and temperature to stabilize.

v. Measure evaporation and precipitation by floating a partially filled, transparent, calibrated, open top container.

vi. Measure water surface at two points 180 degrees apart when possible where attachments, such as ladders exist, at 24-hour intervals. Using sharp pointed hook gauge and fixed metal measure capable of reading to 1/100 of an inch. Continue test for period of time sufficient to produce at least 1/2-inch drop in water surface based on assumption that leakage would occur at maximum allowable rate specified or for 72 hours, whichever is lesser time.

d. Acceptance Criteria:

i. Volume loss shall not exceed 0.075 percent of contained liquid volume in 24-hour period, correcting for evaporation, precipitation, and settlement.

ii. No damp spots or seepage visible on exposed surfaces. Damp spot is defined as sufficient moisture to be transferred to dry hand upon touching.

e. Repairs When Test Fails: Dewater structure; fill leaking cracks with crack repair epoxy as specified in Section 03740, Concrete Repair Crack Injection. Patch areas of damp spots previously recorded, and repeat water leakage test in its entirety until the structure successfully passes the test.

3.12 MANUFACTURER'S SERVICES

A. Provide the following representative at Site in accordance with Section 01640, Manufacturers' Services, for installation assistance, inspection, and certification of proper installation for concrete ingredients, mix design, mixing, and placement.

a. Batch Plant Representative:

i. Observe how concrete mixes are performing.

ii. Be present during first placement of each type of concrete mix.

iii. Assist with concrete mix design, performance, placement, weather problems, and problems as may occur with concrete mix throughout Project.

iv. Establish control limits on concrete mix designs.

b. Admixture Manufacturer's Representative:

i. Demonstrate special features, product performance, product mixing, testing, and placement or installation for each type of admixture.

ii. Observe how concrete mixes are performing.

iii. Be present during first placement of each type of concrete mix.

iv. Assist with concrete mix design, performance, placement, weather problems, and problems as may occur with concrete mix throughout Project, including instructions for redosing.

v. Provide equipment for control of concrete redosing for air entrainment or high range water reducing admixture (superplasticizers) at Site to maintain proper slump and air content if so needed.

c. Bonding Agent Manufacturer's Representative: Demonstrate product performance, product mixing, and placement.

3.13 PROTECTION OF INSTALLED WORK

A. After curing as specified in Section 03370, Concrete Curing, and after applying final floor finish, cover slabs with plywood or particle board or plastic sheeting or other material to keep floor clean and protect it from material and damage due to other construction work.

B. Repair defective areas and areas damaged by construction.

END OF SECTION

SECTION 03370 - CONCRETE CURING

PART 1 GENERAL

1.1 THE REQUIREMENT

A. Protect all freshly deposited concrete from premature drying and excessively hot or cold temperatures, and maintain with minimal moisture loss at a relatively constant temperature for the period of time necessary for the hydration of the cement and proper hardening of the concrete in accordance with requirements specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Concrete Framework

B. Joints in Concrete

C. Cast-in-Place Concrete

D. Grout

E. Concrete Finishes

1.3 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the Section entitled "Submittals", the contractor shall submit the following:

a. Request for acceptance along with procedures for protection of concrete under wet weather placement conditions.

b. Request for placement along with proposed procedures for hot weather placement.

c. Request for acceptance and proposed materials and procedures for moisture preservation.

1.4 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Without limiting the generality of other requirements of these specifications all work hereunder shall conform to the applicable requirements of the referenced portions of the following documents, to the extent that the requirements therein are not in conflict with the provisions of this Section.

a. Specifications for Structural Concrete for buildings, ACI 301.

b. Guide for Measuring, Mixing, Transporting, and Placing Concrete, ACI 304.

c. Hot Weather Concreting, ACI 305.

d. Specifications for Sheet Materials for Curing Concrete, ASTM C171.

e. Specification for Liquid Membrane - Forming Compounds for Curing Concrete, ASTM C309.

f. Federal Specification TT-C-800.

1.5 QUALITY ASSURANCE

A. Curing compound shall not be used on any surface where concrete or other material will be bonded unless the manufacturer certifies that the curing compound will not prevent bond or indicates measures to be taken to completely remove the curing compound from areas to receive bonded applications.

B. Care shall be taken to ensure that curing compounds are compatible with all finish concrete castings.

PART 2 PRODUCTS

2.1 CURING COMPOUNDS

A. All materials shall meet the ASTM specifications C309, Type 1-D or Federal Specification TT-C-800 and shall have a minimum solids content of 30 percent.

PART 3 EXECUTION

3.1 PROTECTION AND CURING

A. All concrete work shall be protected from the elements, flowing water and from defacement of any nature during construction operations.

B. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury. Protect concrete during the curing period such that the concrete temperature does not fall below the requirements of Section 3.02 -Concrete Temperature. Cure concrete in accordance with paragraph E or paragraph F.

C. When concrete is placed in cold weather as defined in ACI 306, the concrete shall be protected in accordance with requirements of ACI 306, Cold Weather Concreting.

D. When concrete is placed in hot weather as defined in ACI 305, the concrete shall be protected in accordance with the requirements of ACI 305, Hot Weather Concreting.

E. After placing and finishing, use one or more of the following methods to preserve moisture in concrete:

a. Ponding or continuous fogging or sprinkling.

b. Application of mats or fabric kept continuously wet.

c. Continuous application of steam (under 150 degrees Fahrenheit).

d. Application of sheet materials conforming to ASTM C171.

e. Application of a curing compound conforming to ASTM C309 or Federal Specification TT-C-800. Apply the compound in accordance with the manufacturer's recommendation on after water sheen has disappeared from the concrete surface and after finishing operations. The rate of application shall not exceed 200 square feet per gallon. For rough surfaces, apply in two directions at right angles to each other.

F. Keep absorbent forms wet until they are removed. After form removal, cure concrete by one of the methods in paragraph E. Frames may be “cracked” within twenty-four hours and kept moist until they are required to be kept in place per Section 03100.

3.2 CONCRETE TEMPERATURE

A. When the average of the highest and lowest temperature during the period from midnight to midnight is expected to drop below 40 F for more than three successive days, concrete shall be delivered to meet the following minimum temperature immediately after placement:

a. 55 degrees Fahrenheit for sections less than 12 in. in the least dimension

b. 50 degrees Fahrenheit for sections 12 in. to 36 in. in the least dimension

c. 45 degrees Fahrenheit for sections 36 in. to 72 in. in the least dimension

d. 40 degrees Fahrenheit for sections greater than 72 in. in the least dimension

B. The temperature of concrete as placed shall not exceed these values by more than 20 degrees Fahrenheit.

C. These minimum requirements may be terminated when temperatures above 50 degrees Fahrenheit occur during more than half of any 24 hour duration.

D. Unless otherwise specified or permitted, the temperature of concrete as delivered shall not exceed 90 degrees Fahrenheit.

E. During and following curing, do not allow the surface of the concrete to change temperature more than the following:

a. 50 degrees Fahrenheit in any 24-hr period for sections less than 12 in. in the least dimension.

b. 40 degrees Fahrenheit for sections from 12 to 36 in. in the least dimension.
c. 30 degrees Fahrenheit for sections 36 to 72 in. in the least dimension.

d. 20 degrees Fahrenheit for sections greater than 72 in. in the least dimension.

3.3 FINAL CURING

A. Cure for at least the first seven days after placement for all concrete except high early strength concrete, for which the period shall be at least the first three days after placement.

a. Alternatively, moisture retention measures may be terminated when:

i. Tests are made on at least two additional cylinders kept adjacent to the structure and cured by the same methods as the structure and tests indicate 70 percent of the specified compressive strength, f'c, as determined in accordance with ASTM C39.

ii. The temperature of the concrete is maintained at 50 degrees fahrenheit or higher for the time required to achieve 85 percent of f'c in laboratory- cured cylinders representative of the concrete in place.

iii. The strength of concrete reaches f'c as determined by accepted nondestructive methods or laboratory-cured cylinder test results.

B. When one of the curing procedures in Paragraph 3.01-E is used initially, the curing procedure may be replaced by one of the other procedures when concrete is one day old, provided concrete is not permitted to become surface dry at any time.

END OF SECTION

SECTION 03600 - GROUT

PART 1 GENERAL

1.1 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required and install grout complete as shown on the Drawings and as specified herein.

1.2 SUBMITTALS

A. Submit to the Engineer, in accordance with Section 01300, shop drawings and product data showing materials of construction and details of installation for:

a. Commercially manufactured nonshrink cementitous grout. The submittal shall include catalog cuts, technical data, storage requirements, product life, working time after mixing, temperature considerations, conformity to required ASTM standards and Material Safety Data Sheet.

b. Commercially manufactured nonshrink epoxy grout. The submittal shall include catalog cuts, technical data, storage requirements, product life, working time after mixing, temperature considerations, conformity to required ASTM standards and Material Safety Data Sheet.

c. Cement grout. The submittal shall include the type and brand of the cement, the gradation of the fine aggregate, product data on any proposed admixtures and the proposed mix of the grout.

d. Concrete grout. The submittal shall include data as required for concrete and fiber reinforcement as delineated in Section. This includes the mix design, constituent quantities per cubic yard and the water/cement ratio.

B. Samples

a. Samples of commercially manufactured grout products when requested by the Engineer.

b. Aggregates for use in concrete grout when requested by the Engineer.

C. Laboratory Test Reports

a. Submit laboratory test data as required under Section 03300 for concrete to be used as concrete grout.

D. Qualifications

a. Grout manufacturers shall submit documentation that they have at least 10 years' experience in the production and use of the proposed grouts which they will supply.

1.3 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)

a. ASTM C531 - Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical Resistant Mortars, Grouts and Monolithic Surfacings and Polymer Concretes.

b. ASTM C579 - Standard Test Method for Compressive Strength of Chemical Resistant Mortars, Grouts and Monolithic Surfacings and Polymer Concretes.

c. ASTM C827 - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens from Cementitious Mixtures.

d. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

e. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics.

B. U.S. Army Corps of Engineers Standard (CRD)

a. CRD C-621 - Corps of Engineers Specification for Nonshrink Grout.

C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.4 QUALITY ASSURANCE

A. Qualifications

a. Grout manufacturer shall have a minimum of 10 years experience in the production and use of the type of grout proposed for the work.

B. Services of Manufacturer's Representative

a. A qualified field technician of the nonshrink grout manufacturer, specifically trained in the installation of the products, shall attend the pre-installation conference and shall be present for the initial installation of each type of nonshrink grout. Additional services shall also be provided, as required, to correct installation problems.

C. Field Testing

a. All field testing and inspection services required shall be provided by the Owner. The Contractor shall assist in the sampling of materials and shall provide any ladders, platforms, etc, for access to the work. The methodsof

testing shall comply in detail with the applicable ASTM Standards.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the jobsite in original, unopened packages, clearly labeled with the manufacturer's name, product identification, batch numbers and printed instructions.

B. Store materials in full compliance with the manufacturer's recommendations. Total storage time from date of manufacture to date of installation shall be limited to 6 months or the manufacturer's recommended storage time, whichever is less.

C. Material which becomes damp or otherwise unacceptable shall be immediately removed from the site and replaced with acceptable material at no additional expense to the Owner.

D. Nonshrink cement-based grouts shall be delivered as preblended, prepackaged mixes requiring only the addition of water.

E. Nonshrink epoxy grouts shall be delivered as premeasured, prepackaged, three component systems requiring only blending as directed by the manufacturer.

1.6 DEFINITIONS

A. Nonshrink Grout: A commercially manufactured product that does not shrink in either the plastic or hardened state, is dimensionally stable in the hardened state and bonds to a clean base plate.

PART 2 PRODUCTS

2.1 GENERAL

A. The use of a manufacturer's name and product or catalog number is for the purpose of establishing the standard of quality desired.

B. Like materials shall be the products of one manufacturer or supplier in order to provide standardization of appearance.

2.2 MATERIALS

A. Nonshrink Cementitious Grout

a. Nonshrink cementitious grouts shall meet or exceed the requirements of ASTM C1107, Grades B or C and CRD C-621. Grouts shall be portland cement based, contain a pre-proportioned blend of selected aggregates and shrinkage compensating agents and shall require only the addition of water. Nonshrink cementitious grouts shall not contain expansive cement or metallic particles. The grouts shall exhibit no shrinkage when tested in conformity with ASTM C827.

i. General purpose nonshrink cementitious grout shall conform to the standards stated above and shall be SikaGrout 212 by Sika Corp.; Set Grout by Master Builders, Inc.; Gilco Construction Grout by Gifford Hill & Co.; Euco NS by The Euclid Chemical Co.; NBEC Grout by U. S. Grout Corp. or equal.

ii. Flowable (Precision) nonshrink cementitious grout shall conform to the standards stated above and shall be Masterflow 928 by Master Builders, Inc.; Hi-Flow Grout by the Euclid Chemical Co.; SikaGrout 212 by Sika Corp.; Supreme Grout by Gifford Hill & Co.; Five Star Grout by U. S. Grout Corp. or equal.

B. Nonshrink Epoxy Grout

a. Nonshrink epoxy-based grout shall be a pre-proportioned, three component, 100 percent solids system consisting of epoxy resin, hardener, and blended aggregate. It shall have a compressive strength of 14,000 psi in 7 days when tested in conformity with ASTM D695 and have a maximum thermal expansion of 30 x 10^{-6} when tested in conformity with ASTM C531. The grout shall be Ceilcote 648 CP by Master Builders Inc.; Five Star Epoxy Grout by U.S. Grout Corp.; Sikadur 42 Grout-Pak by Sika Corp.; High Strength Epoxy Grout by the Euclid Chemical Co. or equal.

C. Cement Grout

a. Cement grouts shall be a mixture of one part portland cement conforming to ASTM C150, Types I, II, or III and 1 to 2 parts sand conforming to ASTM C33 with sufficient water to place the grout. The water content shall be sufficient to impart workability to the grout but not to the degree that it will allow the grout to flow.

D. Concrete Grout

a. Concrete grout shall conform to the requirements of Section 03300 except as specified herein. It shall be proportioned with cement, pozzolan, coarse and fine aggregates, water, water reducer and air entraining agent to produce a mix having an average strength of 2900 psi at 28 days, or 2500 psi nominal strength. Coarse aggregate size shall be ½ in maximum. Slump should not exceed 5-in and should be as low as practical yet still retain sufficient workability.

E. Water

a. Potable water, free from injurious amounts of oil, acid, alkali, organic matter, or other deleterious substances.

PART 3 EXECUTION

3.1 PREPARATION

A. Grout shall be placed over cured concrete which has attained its full design strength unless otherwise approved by the Engineer.

B. Concrete surfaces to receive grout shall be clean and sound; free of ice, frost, dirt, grease, oil, curing compounds, laitance and paints and free of all loose material or foreign matter which may effect the bond or performance of the grout.

C. Roughen concrete surfaces by chipping, sandblasting, or other mechanical means to ensure bond of the grout to the concrete. Remove loose or broken concrete. Irregular voids or projecting coarse aggregate need not be removed if they are sound, free of laitance and firmly embedded into the parent concrete.

    a. Air compressors used to clean surfaces in contact with grout shall be the oilless type or equipped with an oil trap in the air line to prevent oil from being blown onto the surface.

D. Remove all loose rust, oil or other deleterious substances from metal embedments or bottom of baseplates prior to the installation of the grout.

E. Concrete surfaces shall be washed clean and then kept moist for at least 24 hours prior to the placement of cementitious or cement grout. Saturation may be achieved by covering the concrete with saturated burlap bags, use of a soaker hose, flooding the surface, or other method acceptable to the Engineer. Upon completion of the 24 hour period, visible water shall be removed from the surface prior to grouting. The use of an adhesive bonding agent in lieu of surface saturation shall only be used when approved by the Engineer for each specific location of grout installation.

F. Epoxy-based grouts do not require the saturation of the concrete substrate. Surfaces in contact with epoxy grout shall be completely dry before grouting.

G. Construct grout forms or other leakproof containment as required. Forms shall be lined or coated with release agents recommended by the grout manufacturer. Forms shall be of adequate strength, securely anchored in place and shored to resist the forces imposed by the grout and its placement.

    a. Forms for epoxy grout shall be designed to allow the formation of a hydraulic head and shall have chamfer strips built into forms.

H. Level and align the structural or equipment bearing plates in accordance with the structural requirements and the recommendations of the equipment manufacturer.

I. Equipment shall be supported during alignment and installation of grout by shims, wedges, blocks or other approved means. The shims, wedges and blocking devices shall be prevented from bonding to the grout by appropriate bond breaking coatings and removed after grouting unless otherwise approved by the Engineer.

3.2 INSTALLATION - GENERAL

A. Mix, apply and cure products in strict compliance with the manufacturer's recommendations and this Section.

B. Have sufficient manpower and equipment available for rapid and continuous mixing and placing. Keep all necessary tools and materials ready and close at hand.

C. Maintain temperatures of the foundation plate, supporting concrete, and grout between 40 and 90 degrees F during grouting and for at least 24 hours thereafter or as recommended by the grout manufacturer, whichever is longer. Take precautions to minimize differential heating or cooling of baseplates and grout during the curing period.

D. Take special precautions for hot weather or cold weather grouting as recommended by the manufacturer when ambient temperatures and/or the temperature of the materials in contact with the grout are outside of the 60 and 90 degrees F range.

E. Install grout in a manner which will preserve the isolation between the elements on either side of the joint where grout is placed in the vicinity of an expansion or control joint.

F. Reflect all existing underlying expansion, control and construction joints through the grout.

3.3 INSTALLATION - CEMENT GROUTS AND NONSHRINK CEMENTITIOUS GROUTS

A. Mix in accordance with manufacturer's recommendations. Do not add cement, sand, pea gravel or admixtures without prior approval by the Engineer.

B. Avoid mixing by hand. Mixing in a mortar mixer (with moving blades) is recommended. Pre-wet the mixer and empty excess water. Add premeasured amount of water for mixing, followed by the grout. Begin with the minimum amount of water recommended by the manufacturer and then add the minimum additional water required to obtain workability. Do not exceed the manufacturer's maximum recommended water content.

C. Placements greater than 3-in in depth shall include the addition of clean, washed pea gravel to the grout mix when approved by the manufacturer. Comply with the manufacturer's recommendations for the size and amount of aggregate to be added.

D. Place grout into the designated areas in a manner which will avoid segregation or entrapment of air. Do not vibrate grout to release air or to consolidate the material. Placement should proceed in a manner which will ensure the filling of all spaces and provide full contact between the grout and adjoining surfaces. Provide grout holes as necessary.

E. Place grout rapidly and continuously to avoid cold joints. Do not place cement

grouts in layers. Do not add additional water to the mix (retemper) after initial stiffening.

F. Just before the grout reaches its final set, cut back the grout to the substrate at a 45 degree angle from the lower edge of bearing plate unless otherwise approved by the Engineer. Finish this surface with a wood float (brush) finish.

G. Begin curing immediately after form removal, cutback, and finishing. Keep grout moist and within its recommended placement temperature range for at least 24 hours after placement or longer if recommended by the manufacturer. Saturate the grout surface by use of wet burlap, soaker hoses, ponding or other approved means. Provide sunshades as necessary. If drying winds inhibit the ability of a given curing method to keep grout moist, erect wind breaks until wind is no longer a problem or curing is finished.

3.4 INSTALLATION - NONSHRINK EPOXY GROUTS

A. Mix in accordance with the procedures recommended by the manufacturer. Do not vary the ratio of components or add solvent to change the consistency of the grout mix. Do not overmix. Mix full batches only to maintain proper proportions of resin, hardener and aggregate.

B. Monitor ambient weather conditions and contact the grout manufacturer for special placement procedures to be used for temperatures below 60 or above 90 degrees F.

C. Place grout into the designated areas in a manner which will avoid trapping air. Placement methods shall ensure the filling of all spaces and provide full contact between the grout and adjoining surfaces. Provide grout holes as necessary.

D. Minimize "shoulder" length (extension of grout horizontally beyond base plate). In no case shall the shoulder length of the grout be greater than the grout thickness.

E. Finish grout by puddling to cover all aggregate and provide a smooth finish. Break bubbles and smooth the top surface of the grout in conformity with the manufacturer's recommendations.

F. Epoxy grouts are self curing and do not require the application of water. Maintain the formed grout within its recommended placement temperature range for at least 24 hours after placing, or longer if recommended by the manufacturer.

3.5 INSTALLATION - CONCRETE GROUT

A. Screed underlying concrete to the grade shown on the Drawings. Provide the surface with a broomed finish, aligned to drain. Protect and keep the surface clean until placement of concrete grout.

B. Remove the debris and clean the surface by sweeping and vacuuming of all dirt and other foreign materials. Wash the tank slab using a strong jet of water.

Flushing of debris into tank drain lines will not be permitted.

C. Saturate the concrete surface for at least 24 hours prior to placement of the concrete grout. Saturation may be maintained by ponding, by the use or soaker hoses, or by other methods acceptable to the Engineer. Remove excess water just prior to placement of the concrete grout. Place a cement slurry immediately ahead of the concrete grout so that the slurry is moist when the grout is placed. Work the slurry over the surface with a broom until it is coated with approximately 1/16 to 1/8-in thick cement paste. (A bonding grout composed of 1 part portland cement, 1.5 parts fine sand, an approved bonding admixture and water, mixed to achieve the consistency of thick paint, may be substituted for the cement slurry.)

D. Place concrete grout to final grade using the scraper mechanism as a guide for surface elevation and to ensure high and low spots are eliminated. Unless specifically approved by the equipment manufacturer, mechanical scraper mechanisms shall not be used as a finishing machine or screed.

E. Provide grout control joints as indicated on the Drawings.

F. Finish and cure the concrete grout as specified for cast-in-place concrete.

3.6 SCHEDULE

A. The following list indicates where the particular types of grout are to be used:

a. General purpose nonshrink cementitious grout. Use at all locations where non shrink grout is called for on the plans except for base plates greater in area than 3-ft wide by 3-ft long and except for the setting of anchor rods, anchor bolts or reinforcing steel in concrete.

b. Flowable nonshrink cementitious grout. Use under all base plates greater in area than 3-ft by 3-ft. Use at all locations indicated to receive flowable nonshrink grout by the Drawings. The Contractor, at his/her option and convenience, may also substitute flowable nonshrink grout for general purpose nonshrink cementitious grout.

c. Nonshrink epoxy grout. Use for the setting of anchor rods, anchor bolts and reinforcing steel in concrete and for all locations specifically indicated to receive epoxy grout.

d. Cement grout. Cement grout may be used for grouting of incidental base plates for structural and miscellaneous steel such as post base plates for platforms, base plates for beams, etc. It shall not be used when nonshrink grout is specifically called for on the Drawings or for grouting of primary structural steel members such as columns and girders.

e. Concrete grout. Use for overlaying the base concrete to allow more control in placing the surface grade and elsewhere as shown on the Drawings.

END OF SECTION

SECTION 03740 - MODIFICATIONS AND REPAIR TO EXISTING CONCRETE

PART 1 GENERAL

1.1 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required and cut, chip, repair, demolish, excavate, or otherwise modify parts of existing structures or appurtenances as shown on the sketches and as specified herein.

B. Work under this Section shall include repairs to existing deteriorated concrete. Repairs are separated into three basic categories as follows:

a. Surface deterioration, greater than 1/2” and less than 2” depth, no exposed rebar.

b. Surface deterioration, greater than 2” and less than 3”, with exposed rebar, no rebar deterioration.

c. Surface deterioration, greater than 3” to maximum 16” with exposed, deteriorated and/or missing rebar.

1.2 RELATED WORK

A. Cast-In-Place Concrete is included in Section 03301.

B. Grout is included in Section 03600.

1.3 GENERAL

A. No existing structure or concrete shall be shifted, cut, removed, or otherwise altered until written authorization is given by the Engineer.

B. When removing materials or portions of existing structures and when making openings in existing structures, take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work, nor to damage the structures or contents by falling or flying debris. Unless otherwise permitted, line drilling will be required in cutting existing concrete.

C. Manufacturer qualifications: The manufacturer of the specified products shall have a minimum of 10 years’ experience in the manufacture of such products and shall have an ongoing program of training, certifying and technically supporting the Contractor’s personnel.

D. Contractor qualifications: Contractors shall complete a program of instruction in the application of the approved manufacturer’s material and

provide certification from the manufacturer attesting to their training and status as an approved applicator.

E. Furnish a notarized certificate stating that the materials specified meet the project requirements and submit the manufacturer's current printed literature on the specified product.

1.4 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)

a. ASTM D570 - Standard Test Method for Water Absorption of Plastics.

b. ASTM D1653, Method B - Standard Test Method for Water Vaspor Permeability of Organic Coating Films.

c. ASTM D 790 - Standard Test Method for flexural properties of unreinforced and reinforced plastics and electrical insulating materials.

d. ASTM D638 - Standard Test Method for Tensile Properties of Plastics.

e. ASTM D732 - Standard Test Method for Shear Strength of Plastics by Punch Tool

f. ASTM D695 - Standard Test Method for Compressive Properties Rigid Plastics.

g. ASTM C882 - Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear

h. ASTM D1525 - Standard Test Method for Vicat Softening Temperature of Plastics.

B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

PART 2 PRODUCTS

2.1 MATERIALS

A. Epoxy Bonding Compound:

a. The epoxy bonding compound shall be furnished in two components for combining immediately prior to use in accordance with the manufacturer's written instructions and as specified herein.

b. The components of the epoxy resin system shall conform to the following requirements:

i. Component A - Component A shall be a modified epoxy resin of the epichlorohydrin bisphenol A condensation type, containing suitable viscosity control agents and having an epoxide equivalent of 180 to 200.

ii. Component B - Component B shall be primarily a reaction product of an alkyl glycidyl ether and a polyfunctional aliphatic amine containing suitable viscosity agents modified with 2, 4, 6 tri (dimethylamino-methyl) phenol.

iii. The component ratio of B:A shall be 1:1 by volume.

iv. The resultant compound shall be polysulfide free.

c. Properties of Mixed Components:

i. Solids Content: 100 percent by weight

ii. Pot Life: 20 to 30 minutes at 73 Degrees F

iii. Tack-Free Time (thin film): 3 to 5 hrs at 73 Degrees F

iv. Final Cure ASTM D695: 3 days at 73 Degrees F (ASTM D695 percent ultimate strength)

v. Initial Viscosity (A+B): 2400 to 3200 cps minimum at 73 Degrees F

vi. Color mixed: Straw

d. Properties of Cured Material:

i. Neat Material

a. Tensile Strength: 5300 psi minimum at (ASTM D638) 14 days 73 Degrees F cure

b. Tensile Elongation: 4.8 percent at 14 days (ASTM D638 modified) 73 Degrees F cure

c. Compressive Strength: 7000 psi minimum at 28 days 73 Degrees F cure (ASTM D695)

d. Compressive Modulus: 250,000 psi minimum at (ASTM D695)1.0 percent maximum (ASTM D570)

e. Bond Strength: 1500 psi minimum at (Plastic to Hardened) 14 days, 73 Degrees F cure

f. Deflection Temperature: 180 Degrees F minimum (ASTM D1525)

e. Epoxy bonding compound shall be Sikadur Hi-Mod as manufactured by Sika Chemical Corp., Lyndhurst, N.J.; W.R. Grace Co., Cambridge, MA; Adhesive Engineering Co., Lawrence, MA or equal.

B. Epoxy Paste

a. General

i. Epoxy Paste shall be a two-component, solvent-free, asbestos free, moisture insensitive epoxy resin material used to bond dissimilar materials to concrete such as setting railing posts, dowels, anchor bolts and all-threads into hardened concrete and shall comply with the requirements of ASTM C881, Type I, Grade 3 and the additional requirements specified herein. It may also be used to patch existing surfaces where the glue line is 1/8-in or less.

b. Material

i. Properties of the cured material:

a. Compressive Properties (ASTM D695): 10,000 psi minimum at 28 days.

b. Tensile Strength (ASTM D638): 3,000 psi minimum at 14 days.

c. Elongation at Break: 0.3 percent minimum.

d. Flexural Strength (ASTM D790 - Modulus of Rupture): 3,700 psi minimum at 4 days.

e. Shear Strength (ASTM D732): 2,800 psi minimum at 14 days.

f. Water Absorption (ASTM D570): 1.0 percent maximum at 7 days.

g. Bond Strength (ASTM C882): 2,000 psi at 14 days moist cure.

h. Color: Concrete grey.

c. Approved manufacturer's include:

i. Overhead applications: Sika Corporation, Lyndhurst, NJ - Sikadur Hi-mod LV 31; Master Builders, Inc., Cleveland, OH - Concresive 1438 or equal.

ii. Sika Corporation, Lyndhurst, N.J. - Sikadur Hi-mod LV 32; Master Builders, Inc., Cleveland, OH - Concresive 1438 or equal.

C. Non-Shrink Precision Cement Grout, Non-Shrink Cement Grout, Non-Shrink Epoxy Grout and Polymer Modified mortar are included in Section 03600 GROUT.

D. Adhesive Capsule type anchor system shall be equal to Molly parabond two part stud and capsule system by Emhart, Temple, PA or the HVA adhesive Anchoring System by Hilti Fastening Systems, Tulsa, OK. The capsule shall consist of a sealed glass capsule containing premeasured amounts of a polyester or vinylester resin, quartz sand aggregate and a hardener contained in a separate vial within the capsulre.

E. Crack Repair Epoxy Adhesive

a. General

i. Crack Repair Epoxy Adhesive shall be a two-component, solvent- free, moisture insensitive epoxy resin material suitable for crack grouting by injection or gravity feed. It shall be formulated for the specific size of opening or crack being injected.

b. Material

i. Properties of the cured material

a. Compressive Properties (ASTM D695): 10,000 psi minimum at 28 days.

b. Tensile Strength (ASTM D638): 5,300 psi minimum at 14 days. Elongation at Break - 2 to 5 percent.

c. Flexural Strength (ASTM D790 - Modulus of Rupture): 12,000 psi minimum at 14 days (gravity); 4,600 psi minimum at 14 days (injection)

d. Shear Strength (ASTM D732): 3,700 psi minimum at

14 days.

e. Water Absorption (ASTM D570 - 2 hour boil): 1.5 percent maximum at 7 days.

f. Bond Strength (ASTM C882): 2,400 psi at 2 days dry; 2,000 psi at 14 days dry plus 12 days moist.

PART 3 EXECUTION

3.2 GENERAL

A. Cut, chip, repair, reuse, demolish, excavate or otherwise modify parts of the existing structures or appurtenances, as indicated on the sketches, specified herein, or necessary to permit completion of the Work. All work shall comply with other requirements of this of Section and as shown on the sketches.

B. All commercial products specified in this Section shall be stored, mixed and applied in strict compliance with the manufacturer's recommendations.

C. In all cases where concrete is repaired in the vicinity of an expansion joint or control joint the repairs shall be made to preserve the isolation between components on either side of the joint.

D. When drilling holes for dowels/bolts at new or existing concrete, drilling shall stop if rebar is encountered. As approved by the Engineer, the hole location shall be relocated to avoid rebar. Rebar shall not be cut without prior approval by the Engineer. Where possible, rebar locations shall be identified prior to drilling using "rebar locators" so that drilled hole locations may be adjusted to avoid rebar interference.

3.3 REPAIRING EXISTING CONCRETE

A. Remove all deteriorated materials, dirt, oil, grease, and all other bond inhibiting materials from the surface by mechanical means, i.e. - waterblasting, sandblasting, grinding, etc, as approved by the Engineer. Be sure the areas are not less than 1/2-in in depth. Irregular voids or surface stones need not be removed if they are sound, free of laitance, and firmly embedded into parent concrete, subject to the Engineer's final inspection.

B. If reinforcing steel is exposed, it must be mechanically cleaned to remove all contaminants, rust, etc, as approved by the Engineer. If half of the diameter of the reinforcing steel is exposed, chip out behind the steel. The distance chipped behind the steel shall be a minimum of 1/2-in. Reinforcing to be saved shall not be damaged during the demolition operation.

C. After cleaning the exposed reinforcement it is determined that more than ¼ of the effective cross sectional area has been lost, chip the concrete back

along the bar a minimum of 18 bar diameters in each direction from the damaged section and replace the bar with new reinforcement of similar size. Lap the new bar 18 diameters to the exposed non-corroded section. Alternatively, contractor may drill and epoxy grout new rebar in to sound concrete adjacent to deteriorated bar. Embed new bar per grout manufacturer’s requirements.

D. Thoroughly wash the roughened concrete surfaces and keep the surfaces saturated for at least 6 hours before placing new concrete. All free water shall be removed prior to placing the concrete. An epoxy bonding compound as specified may be used in lieu of saturating surface for 6 hours in accordance with repair material manufacturer’s requirements.

E. Repair mortar, shall be placed/pumped to a thickness to match the existing surface.

a. Repair mortar shall be Nonshrink cementitious grout as specified in Section
03600.

F. When the finish surface is not specified to be lined the color of new concrete in the exposed surfaces shall match the color of the existing adjoining concrete as closely as possible.

3.4 CRACK REPAIR

A. Cracks on horizontal surfaces shall be repaired by gravity feeding crack sealant into cracks per manufacturer's recommendations. If cracks are less than 1/16-in in thickness they shall be pressure injected.

B. Cracks on vertical surfaces shall be repaired by pressure injecting crack sealant through valves sealed to surface with crack repair epoxy adhesive per manufacturer's recommendations.

END OF SECTION