

## **Solicitation 473-11980**

### **Provident Park Lighting**

### **Bid Designation: Public**



## **City of Fort Lauderdale**

## Bid 473-11980 Provident Park Lighting

Bid Number 473-11980  
 Bid Title Provident Park Lighting

Bid Start Date Aug 14, 2017 12:32:10 PM EDT  
 Bid End Date Sep 21, 2017 2:00:00 PM EDT  
 Question & Answer End Date Sep 7, 2017 5:00:00 PM EDT

Bid Contact Althea Pemsel  
 Sr. Procurement Specialist  
 Finance  
 apemsel@fortlauderdale.gov

Contract Duration 165 days  
 Contract Renewal Not Applicable  
 Prices Good for 120 days

Bid Comments This project is located at 1412 NW 6th Street, in the City of Fort Lauderdale. The work to be accomplished under this contract includes, but is not limited to, Construction of new electrical service and meter, (consist of providing electrical service from an existing pole via new underground conduits and wires) and includes the installation of 17 light poles and LED fixtures.

**NOTE: Payment on this contract will be made by Visa or MasterCard.** Electrical Contractor license is required for this project.

Point of contact for this solicitation is Althea Pemsel, CPSM, C.P.M., Senior Procurement Specialist, Email apemsel@fortlauderdale.gov  
 Bidding blanks may be obtained free of charge at BIDSINC.COM. Drawing Plans are on file in the Public Works Department, City of Fort Lauderdale at 100 North Andrews Avenue, 4<sup>th</sup> floor, (Monday thru Friday 8:00 am to 4:30 pm) at a **NON-REFUNDABLE** cost of \$25.00 (including sales tax per set) . Only cash or cashier's check made payable to the City of Fort Lauderdale are accepted.

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

### Item Response Form

Item 473-11980--01-01 - Base Bid Total: Base Bid  
 Lot Description Base Bid Total  
 Quantity 1 lump sum  
 Unit Price   
 Delivery Location City of Fort Lauderdale  
     See ITB Specifications  
     See ITB Specifications  
     Fort Lauderdale FL 33301

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Qty 1

**Description**

Construct all work contained in the contract documents for the installation of 17 new light poles and all related electrical work. The bidder shall furnish all labor, tools, materials, equipment, and supplies, and to sustain all of the expense incurred in doing the work, including installation of all materials, equipment, and supplies furnished, as well as other labor, warranties, taxes, insurance, general administration and other miscellaneous costs, overhead and profit, etc., and to do the same strictly in accordance with the contract documents. this shall include mobilization, demobilization, and maintenance of traffic costs (although, no M.O.T. is anticipated for his project). The cost of mobilization shall not exceed five percent (5%) of the lump sum price for the base bid.

Item	<b>473-11980--01-02 - Base Bid Total: Tree Protection Fencing</b>
Lot Description	Base Bid Total
Quantity	<b>1850 linear foot</b>
Unit Price	<input type="text"/>
Delivery Location	<b>City of Fort Lauderdale</b>
	<a href="#">See ITB Specifications</a>
	<a href="#">See ITB Specifications</a>
	Fort Lauderdale FL 33301
	<b>Qty 1850</b>

**Description**

Furnish and install tree protection fencing around existing trees as shown on the plans and in strict accordance with the contract documents.

Item	<b>473-11980--01-03 - Base Bid Total: Root Pruning</b>
Lot Description	Base Bid Total
Quantity	<b>12 each</b>
Unit Price	<input type="text"/>
Delivery Location	<b>City of Fort Lauderdale</b>
	<a href="#">See ITB Specifications</a>
	<a href="#">See ITB Specifications</a>
	Fort Lauderdale FL 33301
	<b>Qty 12</b>

**Description**

Furnish all tools, equipment and labor necessary to root prune and excavate down 24" deep adjacent to those existing trees as indicated on the plans prior to the installation of electrical conduit.

Item	<b>473-11980--01-04 - Base Bid Total: Irrigation Repairs</b>
Lot Description	Base Bid Total
Quantity	<b>1 lump sum</b>
Unit Price	<input type="text"/>
Delivery Location	<b>City of Fort Lauderdale</b>
	<a href="#">See ITB Specifications</a>
	<a href="#">See ITB Specifications</a>
	Fort Lauderdale FL 33301
	<b>Qty 1</b>

**Description**

Furnish all tools, equipment and labor necessary to repair any damage to the existing irrigation system as a result of the work being performed.

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

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**BID NO. 473-11980**

**PROJECT NO. 12167**

**Provident Park  
Lighting Project**



**Issued on Behalf of: The Public Works Department  
100 North Andrews Avenue  
Fort Lauderdale, Florida 33301**

**Project Manager Dane M. Esdelle, MS, CGC, CMIT  
Project Manager II**

**Althea Pemsel, MA, CPSM, C.P.M.  
Senior Procurement Specialist  
E-mail: [apemsel@fortlauderdale.com](mailto:apemsel@fortlauderdale.com)**

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

- Attachment 1 - CITB Non-Collusion Statement
- Attachment 2 - CITB Contract Payment Method
- Attachment 3 - CITB Local Business Preference
- Attachment 4 - CITB Questionnaire Sheets
- Attachment 5 - CITB Prime Contractor ID Form
- Attachment 6 - CITB Construction Bid Certification

## **INVITATION TO BID**

Sealed bids will be received electronically until 2:00 P.M., local time, on September 14, 2017, and opened immediately thereafter in the 5th Floor Conference Room, City Hall, City of Fort Lauderdale, Florida, 100 North Andrews Avenue, for **BID NO., 473-11980, PROJECT NO., 12167.**

This project consists of Drawing File No. 4-140-41, 7 sheets.

This project is located at 1412 NW 6th Street, in the City of Fort Lauderdale. The work to be accomplished under this contract includes, but is not limited to, Construction of new electrical service and meter, (consist of providing electrical service from an existing pole via new underground conduits and wires) and includes the installation of 17 light poles and LED fixtures.

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

**Electrical Contractor license is required for this project.**

**Pre-Bid Meeting/Site visit: A pre-bid meeting will be *NOT* be held.**

it will be the sole responsibility of the bidder to inspect the City's location(s)/facilities **OR** /and become familiar with the scope of the City's requirements and systems prior to submitting a proposal. No variation in price or conditions shall be permitted based upon a claim of ignorance.

Bidding blanks may be obtained **free of charge** at BIDSYNC.COM. Drawing Plans are on file in the Public Works Department, City of Fort Lauderdale at 100 North Andrews Avenue, 4<sup>th</sup> floor, (Monday thru Friday 8:00 am to 4:30 pm) at a **NON-REFUNDABLE cost of \$25.00 (including sales tax per set)**. Only cash or cashier's check made payable to the City of Fort Lauderdale are accepted.

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

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

### **Bid Bonds:**

Bidders can submit bid bonds for projects four different ways:

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

## INVITATION TO BID (continued)

- 4) Bidders can **mail** their bid bond to the Finance Department/Procurement Services Division, 100 North Andrews Avenue, Room 619, Fort Lauderdale, FL 33301-1016, before time of bid opening, with the company name, bid number and title clearly indicated on the envelope.

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

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

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

For information concerning technical specifications, please utilize the question/answer feature provided by BIDSYNC at [www.bidsync.com](http://www.bidsync.com). Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures, will only be transmitted by written addendum. (See addendum section of BIDSYNC Site). **Contractors 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 Contractor 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 – <http://www.fortlauderdale.gov/departments/finance/procurement-services>. For general inquiries, please call (954) 828-5933.

## INSTRUCTIONS TO BIDDERS

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

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

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

INCONSISTENCIES – Any seeming inconsistency between different provisions of the plans, specifications, proposal or contract, or any point requiring explanation must be inquired into by the bidder, in writing, at least ten (10) days prior to the time set for opening proposals. After proposals are opened, the bidders shall abide by the decision of the Engineer as to such interpretation.

ADDENDA AND INTERPRETATIONS - No interpretations of the meaning of the plans, specifications or other contract documents will be made orally to any bidder. Prospective bidders must request such interpretation in writing as instructed in the bid package. To be considered, such request must be received by the Questions and Answers deadline as indicated in BIDSYNC.COM. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. **It is the bidder's responsibility to verify if addendums have been issued in BIDSYNC.COM.** Failure of any bidder to receive any such addenda or interpretation shall not relieve any bidder from any obligation under his bid as submitted. All addenda so issued shall become a part of the contract document. **Bidder** shall verify **in BIDSYNC.COM** that he has all addenda before submitting a bid.

LEGAL CONDITIONS - Bidders are notified to familiarize themselves with the provisions of the laws of the State of Florida relating to hours of labor on municipal work, and with the provisions of the laws of the State of Florida and the Charter and the ordinances of the City of Fort Lauderdale.

PUBLIC ENTITY CRIMES - A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

FORMS OF PROPOSALS - Each proposal and its accompanying statements must be made on the blanks provided. **THE FORMS MUST BE SUBMITTED ELECTRONICALLY, IN GOOD ORDER WITH ALL BLANKS COMPLETED,** and must show the name of the bidder and a statement as to its contents.

## INSTRUCTIONS TO BIDDERS (continued)

**FORMS OF PROPOSALS (CONTINUED)** - The proposal must be signed by one duly authorized to do so, and in case signed by a deputy or subordinate, the principal's properly written authority to such deputy or subordinate must accompany the proposal. No proposal will be accepted, for any reason whatsoever, which is not submitted to the City as stated above, within the specified time.

**INSURANCE** - Contractor shall provide and shall require all of its sub-contractors to provide, pay for, and maintain in force at all times during the term of the Agreement, such insurance, including Property Insurance (Builder's Risk), Commercial General Liability Insurance, Business Automobile Liability Insurance, Workers' Compensation Insurance, Employer's Liability Insurance, and Umbrella/Excess Liability, as stated below. Such policy or policies shall be issued by companies authorized to do business in the State of Florida and having agents upon whom service of process may be made in the State of Florida.

**BID BOND** - A certified check, cashier's check or bank officer's check, for the sum set forth in the advertisement, made payable to the City of Fort Lauderdale, Florida, or bid bond in such amount, shall accompany each proposal as evidence of the good faith and responsibility of the bidder. The check or bond shall be retained by the City as liquidated damages should the bidder refuse to or fail to enter into a contract for the execution of the work embraced in this proposal, in the event the proposal of the bidder is accepted. Retention of such amount shall not be construed as a penalty or forfeiture.

The above bond or check shall be a guarantee that the bidder will, if necessary, promptly execute a satisfactory contract and furnish good and sufficient bonds. As soon as a satisfactory contract has been executed and the bonds furnished and accepted, the check or bond accompanying the proposal of the successful bidder will be returned to him. The certified or other checks or bid bonds of the unsuccessful bidders will be returned to them upon the acceptance of the bid of the successful bidder. If the successful bidder shall not enter into, execute, and deliver such a contract and furnish the required bonds within ten (10) days after receiving notice to do so, the certified or other check or bid bond shall immediately become the property of the City of Fort Lauderdale as liquidated damages. Retention of such amount shall not be construed as a penalty or forfeiture.

**FILLING IN BIDS** - All prices must be electronically submitted in the proposal pages, and all proposals must fully cover all items for which proposals are asked and no other. Bidders are required to state the names and places of residence of all persons interested, and if no other person is interested, the bidder shall distinctly state such fact and shall state that the proposal is, in all respects, fair and without collusion or fraud. Where more than one person is interested, it is required that all persons interested or their legal representative make all verification and subscribe to the proposal.

**PRICES QUOTED:** Deduct any discount offered and quote firm net unit prices. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.

**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

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services, and shall provide the City prices on such additional items or services based upon a formula or method, which is the same or similar to that used in establishing the prices in his proposal. If the price(s) offered are not acceptable to the City, and the situation cannot be resolved to the satisfaction of the City, the City reserves the right to procure those items or services from other vendors, or to cancel the contract upon giving the Contractor thirty (30) days written notice.

DELETION OR MODIFICATION OF SERVICES: The City reserves the right to delete any portion of the Contract at any time without cause, and if such right is exercised by the City, the total fee shall be reduced in the same ratio as the estimated cost of the work deleted bears to the estimated cost of the work originally planned. If work has already been accomplished on the portion of the Contract to be deleted, the Contractor shall be paid for the deleted portion on the basis of the estimated percentage of completion of such portion.

If the Contractor and the City agree on modifications or revisions to the task elements, after the City has approved work to begin on a particular task or project, and a budget has been established for that task or project, the Contractor will submit a revised budget to the City for approval prior to proceeding with the work.

CAUSES FOR REJECTION - No proposal will be canvassed, considered or accepted which, in the opinion of the City Commission, is informal or unbalanced, or contains inadequate or unreasonable prices for any items; each item must carry its own proportion of the cost as nearly as is practicable. Any alteration, erasure, interlineation, or failure to specify bids for all items called for in the schedule shall render the proposal informal.

REJECTION OF BIDS - The City reserves the right to reject any bid if the evidence submitted by the bidder, or if the investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations and to complete the work contemplated. Any or all proposals will be rejected, if there is reason to believe that collusion exists among bidders. A proposal will be considered irregular and may be rejected, if it shows serious omissions, alterations in form, additions not called for, conditions or unauthorized alternates, or irregularities of any kind. The City reserves the right to reject any or all proposals and to waive such technical errors as may be deemed best for the interests of the City.

BID PROTEST PROCEDURE: Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the City to follow the City's procurement ordinance or any applicable law may protest to the Procurement Division – Procurement Manager, 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: [http://www.fortlauderdale.gov/purchasing/notices\\_of\\_intent.htm](http://www.fortlauderdale.gov/purchasing/notices_of_intent.htm). The complete protest ordinance may be found on the City's website at the following link: <http://www.fortlauderdale.gov/purchasing/protestordinance.pdf>

WITHDRAWALS - Any bidder may, without prejudice to himself, withdraw his proposal at any time prior to the expiration of the time during which proposals may be submitted. Such request for withdrawal must be in writing and signed in the same manner and by the same person who signed the proposal. After expiration of the period for receiving proposals, no proposal can be withdrawn, modified, or explained.

CONTRACT - The bidder to whom award is made shall execute a written contract to do the work and maintain the same in good repair until final acceptance by the proper authorities, and shall furnish

## INSTRUCTIONS TO BIDDERS (continued)

good and sufficient bonds as specified within ten (10) days after receiving such contract for execution. If the bidder to whom the first award is made fails to enter into a contract as provided, the award may be annulled and the contract let to the next lowest bidder who is reliable, responsible, and responsive in the opinion of the City Commission, and that bidder shall fulfill every stipulation and obligation as if such bidder were the original party to whom award was made.

The contract shall provide that the Contractor agrees to correct any defective or faulty work or material, which may appear within one (1) year after completion of the work and receipt of final payment.

**ENFORCEMENT OF SPECIFICATIONS** - Copies of the specifications will be placed in the hands of all the assistants to the Engineer and Inspectors employed on the work, who shall enforce each and every requirement of the contract. Such assistants shall have no authority to vary from such requirements.

**COPIES OF DRAWING PLANS** - Copies of the drawing plans are on file in the Public Works Department, City Hall, 4<sup>th</sup> Floor, 100 N. Andrews Avenue, Fort Lauderdale, Florida 33301.

**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 (2014), 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, 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 save 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



## INSTRUCTIONS TO BIDDERS (continued)

period up to three (3) years. The City may also require submittal of the records from either the Contractor, the Subcontractor, or both. For the purpose of this Section, records shall include all books of account, supporting documents and papers deemed necessary by the City to assure compliance with the contract provisions.

Failure of the Contractor or Subcontractor to comply with these requirements may result in disqualification or suspension from bidding for future contracts or disapproval as a Subcontractor at the option of the City.

The Contractor shall assure that each of its Subcontractors will provide access to its records pertaining to the project upon request by the City.

**PERIODIC ESTIMATE FOR PARTIAL PAYMENT** - After the Contractor has submitted a periodic estimate for partial payment, approved and certified by the Public Works Department, the City shall make payment in the manner provided in the Contract Documents and in accordance with Florida's Prompt Payment Act, Section 218, Florida Statutes.

**RESERVATION FOR AWARD AND REJECTION OF BIDS** - The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.

**MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS** - It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the City does not have any preference or set aside programs in place, it is committed **to a policy of equitable participation for these firms**. The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least fifty-one percent (51%) of which is owned by minority group members or, in the case of a publicly owned business, at least fifty-one percent (51%) of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

**INSTRUCTIONS TO BIDDERS (continued)**

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least fifty-one percent (51%) of which is owned by females or, in the case of a publicly owned business, at least fifty-one percent (51%) of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK includes persons having origins in any of the Black racial groups of Africa.

WHITE includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

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-00-27 & Resolution No. 07-101, Lobbying Activities. Copies of Ordinance No., C-00-27, and Resolution No. 07-101, may be obtained from the City Clerk's Office on the 7th Floor of City Hall, 100 N. Andrews Avenue, Fort Lauderdale, Florida. The ordinance may also be viewed on the City's website at [http://www.fortlauderdale.gov/clerk/LobbyistDocs/lobbyist\\_ordinance.pdf](http://www.fortlauderdale.gov/clerk/LobbyistDocs/lobbyist_ordinance.pdf).

## SPECIAL CONDITIONS

### PURPOSE

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified bidders, hereinafter referred to as the Contractor, to provide all labor, material, and equipment required to construct new electrical service and meter, (consist of providing electrical service from an existing pole via new underground conduits and wires) and includes the installation of 17 light poles and LED fixtures.

### TRANSACTION FEES

The City of Fort Lauderdale uses BidSync ([www.bidsync.com](http://www.bidsync.com)) to distribute and receive bids and proposals. There is no charge to vendors/contractors to register and participate in the solicitation process, nor will any fees be charged to the awarded contractor.

### SUBMISSION OF BIDS

It is the sole responsibility of the Contractor to ensure that their bid is submitted electronically through BidSync at [www.bidsync.com](http://www.bidsync.com) and that any bid security not submitted via BidSync reaches the City of Fort Lauderdale City Hall, Procurement Services Division, 6<sup>th</sup> floor, Room 619, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301 in a sealed envelope marked on the outside with the ITB solicitation number and Contractor's name, no later than the time and date specified in this solicitation. **PAPER BID SUBMITALS WILL NOT BE ACCEPTED. PLEASE SUBMIT YOUR BID RESPONSE ELECTRONICALLY.**

### INFORMATION OR CLARIFICATION

For information concerning procedures for responding to this solicitation, contact **Althea Pemsel, CPSM, Senior Procurement Specialist**, via email at [apemsel@fortlauderdale.gov](mailto:apemsel@fortlauderdale.gov). Such contact shall be for clarification purposes only.

For information concerning technical specifications please utilize the question/answer feature provided by BidSync at [www.bidsync.com](http://www.bidsync.com). Questions of a material nature must be received prior to the cut-off date specified in the solicitation. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. (See addendum section of BidSync Site). **Contractors 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 Contractor has familiarized himself with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in BidSync shall become part of any contract that is created from this ITB.

### PRE-BID MEETING AND/OR SITE VISIT

There will **NOT be a pre-bid meeting.**

It will be the sole responsibility of the bidder to inspect the City's location(s)/facilities and/or become familiar with the scope of the City's requirements and systems prior to submitting a proposal. No variation in price or conditions shall be permitted based upon a claim of ignorance.

## CONTRACT PERIOD

The Contractor recognizes that TIME IS OF THE ESSENCE. The Work shall commence within 14 calendar days **(10 working days)** of the date of the Notice to Proceed.

The Work shall be Substantially Completed within 120 calendar days **(85 working days)** after the date when the Contract Time commences to run as provided in the Notice to Proceed.

The Work shall be finally completed on the Final Completion Date and ready for final payment in accordance with this Agreement within 165 calendar days **(120 working days)** after the date when the Contract Time commences to run as provided in the Notice to Proceed.

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

At time of award of contract, the City reserves the right to set a maximum dollar limit that may be expended on this project. Contract quantities of any or all items may be increased, reduced, or eliminated to adjust the contract amount to coincide with the amount of work necessary or to bring the contract value to within the established limit. All quantities are estimated and the City reserves the right to increase, reduce, or eliminate the contract quantities in any amount.

The undersigned bidder affirms that he has or will obtain all equipment necessary to complete the work described, that he has or will obtain all required permits and licenses from the appropriate agencies, and that his firm is authorized to do business in the State of Florida.

## BID SECURITY

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

## REQUIRED LICENSES/CERTIFICATIONS

Contractor must possess the following licenses/certifications to be considered for award:

**Licensed Electrical Contractor authorized to work in Fort Lauderdale, Broward County, and the State of Florida.**

***Note: Contractor must have proper licensing prior to submitting bid and must submit evidence of same with bid.***

**SPECIFIC EXPERIENCE REQUIRED**

The contractor shall have previous experience in constructing electrical improvements to existing public facilities, in the State of Florida within the last five (5) years. Bidder shall submit proof of construction 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.

**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 Permit fees exceed the allowance indicated, the City will reimburse the contractor the actual amount of City Permit Fees required for project completion.

<b>Allowance</b>	<b>\$</b>
Permitting Fees Allowance	\$ 10,000
<b>TOTAL</b>	<b>\$ 10,000</b>

*Note: The City will add this allowance to your bid.*

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

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, Worker's Compensation Insurance, Employer's Liability Insurance, and Umbrella/Excess Liability, as stated below, as well as Professional Liability insurance in the amount of \$1,000,000 for any Architectural and/or Engineering requirements associated with the fulfillment of the contract required. 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. A Sample Insurance Certificate shall be included with the proposal to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of the coverage.

The City is required to be named as additional insured on the Commercial General Liability insurance policy. **BINDERS ARE UNACCEPTABLE.** The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operations of the Contractor. Any exclusions or provisions in the insurance maintained by the Contractor that precludes coverage for the work contemplated in this Agreement shall be deemed unacceptable, and shall be considered a breach of contract.

The Contractor shall provide the City an original Certificate of Insurance for policies required by Article 10. All certificates shall state that the City shall be given ten (10) days' notice prior to expiration or cancellation of the policy. The insurance provided shall be endorsed or amended to comply with this notice requirement. In the event that the insurer is unable to accommodate, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested and addressed to the Finance Department. Such policies shall: (1) name the insurance company or companies affording coverage acceptable to the City, (2) state the effective and expiration dates of the policies, (3) include special endorsements where necessary. Such policies provided under Article 10 shall not be affected by any other policy of insurance, which the City may carry in its own name.

Contractor shall as a condition precedent of this Agreement, furnish to the City of Fort Lauderdale, c/o Project Manager, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, Certificate(s) of Insurance upon execution of this Agreement, which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

Property Insurance (Builder's Risk): The Contractor shall purchase and maintain property insurance upon the Work at or off the site of 100% of the contract completed value. These policies shall insure the interest of the owner, contractor and subcontractors in the Work, and shall insure against "all risks" of physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage. All such insurance required by this paragraph shall remain in effect until the Work is completed and accepted by the City.

#### Commercial General Liability

##### Limits of Liability:

Bodily Injury and Property Damage - Combined Single Limit	
Each Occurrence	\$1,000,000
Project Aggregate	\$1,000,000
General Aggregate	\$2,000,000
Personal Injury	\$1,000,000
Products/Completed Operations	\$1,000,000

##### Endorsements Required:

City of Fort Lauderdale included as an Additional Insured  
 Broad Form Contractual Liability  
 Waiver of Subrogation  
 Premises/Operations  
 Products/Completed Operations  
 Independent Contractors  
 Owners and Contractors Protective Liability  
 Contractors Pollution Liability

#### Business Automobile Liability

##### Limits of Liability:

Bodily Injury and Property Damage - Combined Single Limit	
All Autos used in completing the contract	
Including Hired, Borrowed or Non-Owned Autos	
Any One Accident	\$1,000,000

##### Endorsements Required:

Waiver of Subrogation

#### Workers' Compensation and Employer's Liability Insurance

Limits: Workers' Compensation – Per Florida Statute 440  
 Employers' Liability - \$500,000

Any firm performing work on behalf of the City of Fort Lauderdale must provide Workers' Compensation insurance. Exceptions and exemptions can only be made if they are in accordance with Florida Law.

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

**Umbrella/Excess Liability:** The Contractor shall provide umbrella/excess coverage with limits of no less than \$2,000,000 excess of Commercial General Liability, Automobile Liability and Employer's Liability.

All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida, with the following qualifications:

The Contractor's insurance must be provided by an A.M. Best's "A" -rated or better insurance company authorized to issue insurance policies in the State of Florida, subject to approval by the City's Risk Manager. Any exclusions or provisions in the insurance maintained by the Contractor that precludes coverage for work contemplated in this project shall be deemed unacceptable, and shall be considered breach of contract. NOTE: CITY PROJECT NUMBER MUST APPEAR ON EACH CERTIFICATE.

A Sample Insurance Certificate shall be included with the proposal to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of the coverage.

Compliance with the foregoing requirements shall not relieve the Contractor of their liability and obligation under this section or under any other section of this Agreement.

The Contractor shall be responsible for assuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the Project. If insurance certificates are scheduled to expire during the contractual period, the Contractor shall be responsible for submitting new or renewed insurance certificates to the City at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates that cover the contractual period, the City shall:

Suspend the Agreement until such time as the new or renewed certificates are received by the City.

The City may, at its sole discretion, terminate the Agreement for cause and seek damages from the Contractor in conjunction with the violation of the terms and conditions of the Agreement.

## **PERFORMANCE AND PAYMENT BOND: 100%**

Number of awards anticipated: one (1)

### **CITY PROJECT MANAGER**

The Project Manager is hereby designated by the City as Dane M. Esdelle, MS, CGC,CMIT, whose address is 100 North Andrews, 4<sup>th</sup> Floor, Fort Lauderdale, FL 33301. 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.



**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 (\$200.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. (See Article 16, Liquidated Damages Clause, of the Contract)

**REGULAR CONTRACTOR WORK SCHEDULE: 8:00 am to 7:00 pm Monday through Friday.****CITY ENGINEERING INSPECTORS HOURS: 8:00 am to 4:30 pm Monday through Friday.**

City Inspector hours are 8:00 a.m. to 4:30 p.m. Any inspection requested by the contractor outside those hours will be considered overtime to be paid by the Contractor.

**Overtime Cost: \$219**

CITY OF FORT LAUDERDALE  
CONSTRUCTION AGREEMENT

THIS AGREEMENT made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the City of Fort Lauderdale, a Florida municipal corporation (City) and \_\_\_\_\_, (Contractor), (parties);

WHEREAS, the City desires to retain a contractor for the Project as expressed in its Invitation to Bid No., \_\_\_\_\_, Project Number, \_\_\_\_\_, which was opened on \_\_\_\_\_; and,

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

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

**ARTICLE 1 – DEFINITIONS**

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

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

- 1.7 Change Order - A change order is defined as a written order to a contractor approved by the City, authorizing a revision of an underlying agreement between the City and a contractor that is directly related to the original scope of work or an adjustment in the original contract price or the contract time directly related to the original scope of work, issued on or after the effective date of the contract.
- 1.8 City – The City of Fort Lauderdale, Florida, including but not limited to its employees, agents, officials, representatives, contractors, subcontractors, volunteers, successors and assigns, with whom the Contractor has entered into the Agreement and for whom the Work is to be provided.
- 1.9 Contract Documents – The Contract Documents shall consist of this Agreement, Exhibits to this Agreement, Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance, Notice of Award and Notice to Proceed, General Conditions as amended by the 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, change orders and 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 monies payable to the Contractor by the City under the Contract Documents and in accordance with the line item unit prices listed in the Bid.
- 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 – An adjective which when modifying the word "Work" refers to work that is unsatisfactory, faulty, or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to the Project Manager's recommendation of final payment.

- 1.15 Effective Date of the Agreement – The effective date of the agreement shall be the date the City Commission approves the work. The contractor shall provide all required payment and performance bonds and insurances to the City within ten (10) Calendar days following the City Commission approval. Upon verification of all bonds and insurances, the City will issue a notice to proceed (NTP) to the Contractor. Contract time will commence on the date when the Notice to Proceed is issued. The Contractor shall commence the work immediately upon receipt of the Notice to Proceed. Failure of the contractor to proceed with the work will constitute non-performance of the Contractor and would be ground for termination of the contract per ARTICLE 17 of 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.
- 1.17 Hazardous Materials (HAZMAT) - Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment defined in Section 101(14) of Comprehensive Environmental Response, Compensation and Liability Act of 1980 and in 40 CFR 300.6. Also defined by 49 CFR 171.8 as a substance or material designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.
- 1.18 Hazardous Substance - As defined by Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act; any substance designated pursuant to Section 311(b) (2) (A) of the Clean Water Act; any element, compound, mixture, solution or substance designated pursuant to Section 102 identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act {but not including any waste listed under Section 307[a] of the Clean Water Act}; any hazardous air pollutant listed under Section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof, which is not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
- 1.19 Hazardous Waste - Those solid wastes designated by OSHA in accordance with 40 CFR 261 due to the properties of ignitability, corrosivity, reactivity, or toxicity. Any material that is subject to the Hazardous Waste Manifest requirements of the EPA specified in 40 CFR Part 262.
- 1.20 Holidays - Those designated non-work days as established by the City Commission of the City of Fort Lauderdale.
- 1.21 Inspection – The term “inspection” and the act of inspecting as used in this Agreement is defined to mean the examination of construction to ensure that it conforms to the design concept expressed in the plans and specifications. This term shall not be construed to mean supervision, superintending and/or overseeing.

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- 1.22 Notice of Award - The written notice by City to the Contractor stating that upon compliance by the Contractor with the conditions precedent enumerated therein, within the time specified that the City will sign and deliver this Agreement.
- 1.23 Notice to Proceed – A written notice given by the City to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contract Time will end.
- 1.24 Plans - The drawings which show the character and scope of the work to be performed and which have been prepared or approved by the City and are referred to in 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 total construction of the Work to be provided as defined in the Contract Documents.
- 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 the Engineer of Record or a Professional Land Surveyor licensed in the State of Florida.
- 1.31 Substantially Completed Date – A date when the Contractor has requested in writing, stating that the Work is substantially completed and is ready for an inspection and issuance of a final punch list for the Project.
- 1.32 Work – The entire completed delivered product or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating material and equipment into the product, all as required by the Contract Documents.

## 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:

Provident Park Lighting  
ITB 473-11980, Project 12167

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

### PROJECT DESCRIPTION

This project is located at 1412 NW 6th Street, in the City of Fort Lauderdale. The work to be accomplished under this contract includes, but is not limited to, Construction of new electrical service and meter as well as new site/lighting, consisting of 17 light poles and associated conduits and wiring.

- 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 those subcontractors that will be utilized by the Contractor. 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 Dane M. Esdelle, MS, CGC, whose address is 100 N. Andrews Avenue, 4<sup>th</sup> Floor, Fort Lauderdale, FL 33301. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

## ARTICLE 4 – CONTRACT DOCUMENTS

The Contract Documents which comprise the entire Agreement between the City and Contractor are attached to this Agreement, are made a part hereof and consist of the following:

- 4.1 This Agreement.
- 4.2 The Contract Documents may only be altered, amended, or repealed in accordance with the specific provisions of the terms of this Agreement.
- 4.3 Exhibits to this Agreement: (Plans sheets [ ] to [ ] inclusive).
- 4.4 Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance.

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- 4.5 Notice of Award and Notice to Proceed.
- 4.6 General Conditions as amended by the Special Conditions.
- 4.7 Technical Specifications.
- 4.8 Plans/Drawings.
- 4.9 Addenda number \_\_\_\_\_ through \_\_\_\_\_, inclusive.
- 4.10 Bid Form and supplement Affidavits and Agreements.
- 4.11 All applicable provisions of State and Federal Law.
- 4.12 Invitation to Bid No., \_\_\_\_\_, Instructions to Bidders, and Bid Bond.
- 4.13 Contractor's response to the City's Invitation to Bid No., \_\_\_\_\_, dated \_\_\_\_\_.
- 4.14 Schedule of Completion and Schedule of Values.
- 4.15 All amendments, modifications and supplements, change orders and work directive changes issued on or after the Effective Date of the Agreement.
- 4.16 Any additional documents that are required to be submitted under the Agreement.
- 4.17 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.

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

- a. Specific direction from the City Manager (or designee).
- b. Approved change orders, addenda or amendments.
- c. Specifications (quality) and Drawings (location and quantity).
- d. Supplemental conditions or special terms.
- e. General Terms and Conditions.
- f. This Agreement dated \_\_\_\_\_ and any attachments.

- g. Invitation to Bid No., \_\_\_\_\_, and the specifications prepared by the City.
- h. Contractor's response to the City's Invitation to Bid No., \_\_\_\_\_, dated \_\_\_\_\_.
- i. Schedule of Values.
- j. 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, at once and before proceeding with the Work affected shall obtain a written interpretation or clarification from the City.

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

#### **ARTICLE 5 – CONTRACT TIME**

- 5.1 The Contractor recognizes that **TIME IS OF THE ESSENCE**. The Work shall commence within 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 165 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.

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- 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 item 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 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 (1<sup>st</sup>) and the tenth (10<sup>th</sup>) 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 percent (90%) of the value of Work completed less in each case the aggregate of payments previously made.
- 7.4 Final Payment. Upon final completion of the Work in accordance with the General Conditions, as may be supplemented, the City shall pay Contractor an amount sufficient to increase total payments to one-hundred percent (100%) of the Contract Price. However, not less than ten percent (10%) 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.
- 7.7 The City shall make payment to the Contractor through utilization of the City's P-Card Program.

## **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, 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 Proposed Price and that the project can be completed for the Proposed Price submitted within the Contract Time as defined in this Agreement. Furthermore, Contractor warrants and confirms that he 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 carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Works, and finds and has further determined that no conditions exist that would in any manner affect the Proposed Price and that the project can be completed for the Proposed Price submitted.
- 8.5 Contractor has made or caused to be made examinations, investigations, tests and studies of such reports and related data in addition to those referred to in Paragraphs 8.2, 8.3 and 8.4 above as he 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. Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

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

8.7 Labor

8.7.1 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.

8.7.2 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.

8.7.3 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 Contract in accordance with Article 17.

8.7.4 The Contractor shall assign personnel to the job site that have successfully completed training programs related to trench safety, confined space and maintenance of traffic. A certified "competent person" shall be assigned to the job site. Personnel certified by the International Municipal Signal Associations with Florida Department of Transportation qualifications are required relative to maintenance of traffic. Failure to pursue the Work with the properly certified supervisory staff may result in notice to stop work or terminate the Contract in accordance with Article 17.

8.8 Materials:

8.8.1 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.

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

- 8.9 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 7 a.m. and 6:00 p.m., Monday through Friday. The Contractor will not permit overtime work or the performance of 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. If the Project Manager permits overtime work, 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. and any Work requiring inspection oversight being performed outside of this timeframe shall be paid for by the Contractor as Inspector overtime. 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.
- 8.10 Patent Fee and Royalties: The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work, or any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. The Contractor hereby expressly binds himself or itself to indemnify and save 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.
- 8.11 Permits: The Contractor shall obtain and pay for all permits and licenses. There shall be no allowance for Contractor markup, overhead or profit for permits and licenses. The Contractor shall pay all government charges which are applicable at the time of opening of proposals. It shall be the responsibility of the Contractor to secure and pay for all necessary licenses and permits of a temporary nature necessary for the prosecution of Work.
- 8.12 Law and Regulations: The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the specifications or plans are at variance therewith, the Contractor shall give the Project Manager prompt written notice thereof, 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 and regulations, and without such notice to the Project Manager, the Contractor shall bear all costs arising therefrom; however, it shall not be the Contractor's primary responsibility to make certain that the specifications and plans are in accordance with such laws, ordinances, rules and regulations.
- 8.13 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, State of Florida.

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

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

- 8.15 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:

8.15.1 Flow of material and equipment from suppliers.

8.15.2 The interrelated work with affected utility companies.

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

8.15.4 The effort of independent testing agencies.

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

- 8.16 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

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professional land surveyor registered in the State of Florida. Contractor shall provide the City with a minimum of three (3) sets of signed and sealed record drawings (Final As-Builts) and a CD of the electronic drawings files created in AutoCad 2014 or later. All costs associated with survey work required for construction layout and as-built preparation shall be the responsibility of the Contractor.

## 8.17 Safety and Protection:

8.17.1 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:

- 8.17.1.1 All employees working on the project and other persons who may be affected thereby.
- 8.17.1.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
- 8.17.1.3 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.

8.17.2 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.

8.18 Emergencies: In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the City is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Project Manager prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.

8.20 Risk of Loss: The risk of loss, injury or destruction shall be on the Contractor until acceptance of the Work by the City. Title to the Work shall pass to the City upon acceptance of the Work by the City.

8.21 Environmental: The Contractor has fully inspected the Premises and agrees, except as to the presence of any asbestos, to accept the Premises in an "as is" physical condition, without representation or warranty by the City of any kind, including, without limitation, any and all existing environmental claims or obligations that may arise from

the presence of any "contamination" on, in or about the Premises. Further, Contractor and all entities claiming by, through or under the Contractor, releases and discharges the City, from any claim, demand, or cause of action arising out of or relating to the Contractor's use, handling, storage, release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of any hazardous substances including asbestos on, under, from or about the Premises. The Contractor shall have no liability for any pre-existing claims or "contamination" on the Premises.

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

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

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

The scope of the indemnity obligations includes, but is not limited to: (a) all consequential damages; (b) the cost of any required or necessary repair, cleanup, or detoxification of the applicable real estate and the preparation and implementation of any closure, remedial or other required plan, including without limitation; (i) the costs of removal or remedial action incurred by the United States government or the State of Florida or response costs incurred by any other person, or damages from injury to destruction of, or loss of, natural resources, including the cost of assessing such injury, destruction, or loss, incurred pursuant to the Comprehensive Environmental

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Response, Compensation and Liability Act, as amended; (ii) the clean-up costs, fines, damages, or penalties incurred pursuant to any applicable provisions of Florida law; and (iii) the cost and expenses of abatement, correction or cleanup, fines, damages, response costs, or penalties which arise from the provisions of any other statute, law, regulation, code ordinance, or legal requirement state or federal; and (c) liability for personal injury or property damage arising under any statutory or common law tort theory, including damages assessed for the maintenance of a public private nuisance, response costs, or for the carrying on of an abnormally dangerous activity.

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

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

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

8.24 Weather Emergencies: Upon issuance of a Hurricane Watch by the National Weather Service, the Contractor shall submit to the City a plan to secure the work area in the event a Hurricane Warning is issued. The plan shall detail how the Contractor will secure the Premises, equipment and materials in a manner as to prevent damage to the Work and prevent materials and equipment from becoming a hazard to persons and property on and around the Premises. The plan shall include a time schedule

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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 he 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 purposes, such acts or circumstances shall include, but not be limited to weather conditions affecting performance, floods, epidemics, war, riots, strikes, lockouts, or other industrial disturbances, or protest demonstrations. Should such acts or circumstances occur, the parties shall use their best efforts to overcome the difficulties arising therefrom and to resume the Work as soon as reasonably possible with the normal pursuit of the Work.

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

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

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

- 8.26 Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assisted Contracts: The recipient shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under

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

## **ARTICLE 9 – CITY’S RESPONSIBILITIES**

- 9.1 The City shall furnish the data required of the City under the Contract Documents promptly and shall make payments to the Contractor promptly after they are due as provided in Article 7.
- 9.2 The City’s duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in the Contract Documents.
- 9.3 Technical Clarifications and Interpretations:
- 9.3.1 The City shall issue, with reasonable promptness, such written clarifications or interpretations of the Contract Documents as it may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. Should the Contractor fail to request interpretation of questionable items in the Contract Documents, the City shall not entertain any excuse for failure to execute the Work in a satisfactory manner.
- 9.3.2 The City shall interpret and decide matters concerning performance under the requirements of the Contract Documents, and shall make decisions on all claims, disputes or other matters in question. Written notice of each claim, dispute or other matter will be delivered by claimant to the other Party but in no event later than five (5) days after the occurrence of event, and written supporting data will be submitted to the other Party within five (5) days after such occurrence. All written decisions of the City on any claim or dispute will be final and binding.
- 9.4 The Contractor shall perform all Work to the reasonable satisfaction of the City in accordance with the Contract Documents. In cases of disagreement or ambiguity, the City shall decide all questions, difficulties, and disputes of whatever nature, which may arise under or by reason of this Agreement or the quality, amount and value of the Work, and the City’s decisions on all claims, questions and determination are final.

## 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: 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.

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 (2014), 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.

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

10.3.1 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, as well as Professional Liability insurance in the amount of \$1,000,000 for any Architectural and or Engineering requirements associated with the

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fulfillment of the contract if required. 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. **A Sample Insurance Certificate shall be included with the proposal to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of the coverage.**

- A. The City is required to be named as additional insured on the Commercial General Liability insurance policy. BINDERS ARE UNACCEPTABLE. The insurance coverage required shall include those classifications, as listed in standard liability insurance manuals, which most nearly reflect the operations of the Contractor. Any exclusions or provisions in the insurance maintained by the Contractor that precludes coverage for the work contemplated in this Agreement shall be deemed unacceptable, and shall be considered a breach of contract.
- B. The Contractor shall provide the City an original Certificate of Insurance for policies required by Article 10. All certificates shall state that the City shall be given ten (10) days' notice prior to expiration or cancellation of the policy. The insurance provided shall be endorsed or amended to comply with this notice requirement. In the event that the insurer is unable to accommodate, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested and addressed to the Finance Department. Such policies shall: (1) name the insurance company or companies affording coverage acceptable to the City, (2) state the effective and expiration dates of the policies, (3) include special endorsements where necessary. Such policies provided under Article 10 shall not be affected by any other policy of insurance, which the City may carry in its own name.
- C. Contractor shall as a condition precedent of this Agreement, furnish to the City of Fort Lauderdale, c/o Project Manager, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, Certificate(s) of Insurance upon execution of this Agreement, which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

- 10.3.2 Property Insurance (Builder's Risk): The Contractor shall purchase and maintain property insurance upon the Work at or off the site of 100% of the contract completed value. These policies shall insure the interest of the owner, contractor and subcontractors in the Work, and shall insure against "all risks" of physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage. All such insurance required by this paragraph shall remain in effect until the Work is completed and accepted by the City.

### 10.3.3 Commercial General Liability

- A. Limits of Liability:
- |   |             |
|---|-------------|
| Bodily Injury and Property Damage - Combined Single Limit |             |
| Each Occurrence   | \$1,000,000 |
| Project Aggregate   | \$1,000,000 |
| General Aggregate   | \$2,000,000 |
| Personal Injury   | \$1,000,000 |
| Products/Completed Operations                             | \$1,000,000 |
- B. Endorsements Required:
- City of Fort Lauderdale included as an Additional Insured
  - Broad Form Contractual Liability
  - Waiver of Subrogation
  - Premises/Operations
  - Products/Completed Operations
  - Independent Contractors
  - Owners and Contractors Protective Liability
  - Contractor's Pollution Liability

### 10.3.4 Business Automobile Liability

- A. Limits of Liability:
- |  |             |
|--|-------------|
| Bodily Injury and Property Damage - Combined Single Limit                              |             |
| All Autos used in completing the contract including Hired, Borrowed or Non-Owned Autos |             |
| Any One Accident   | \$1,000,000 |
- B. Endorsements Required:
- Waiver of Subrogation

### 10.3.5 Workers' Compensation and Employer's Liability Insurance

Limits: Workers' Compensation – Per Florida Statute 440  
Employers' Liability - \$500,000

Any firm performing work on behalf of the City of Fort Lauderdale must provide Workers' Compensation insurance. Exceptions and exemptions can only be made if they are in accordance with Florida Law.

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

### 10.3.6 Umbrella/Excess Liability: The Contractor shall provide umbrella/excess coverage with limits of no less than \$2,000,000 excess of Commercial General Liability, Automobile Liability and Employer's Liability.

### 10.3.7 All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida, with the following qualifications:

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The Contractor's insurance must be provided by an A.M. Best's "A-" rated or better insurance company authorized to issue insurance policies in the State of Florida, subject to approval by the City's Risk Manager. Any exclusions or provisions in the insurance maintained by the Contractor that precludes coverage for work contemplated in this project shall be deemed unacceptable, and shall be considered breach of contract.

NOTE: CITY PROJECT NUMBER MUST APPEAR ON EACH CERTIFICATE.

**A Sample Insurance Certificate shall be included with the proposal to demonstrate the firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the insurance companies' names for all required coverage, and the dollar amounts of the coverage.**

Compliance with the foregoing requirements shall not relieve the Contractor of their liability and obligation under this section or under any other section of this Agreement.

*The Contractor shall be responsible for assuring that the insurance certificates required in conjunction with this Section remain in force for the duration of the Project. If insurance certificates are scheduled to expire during the contractual period, the Contractor shall be responsible for submitting new or renewed insurance certificates to the City at a minimum of thirty (30) calendar days in advance of such expiration. In the event that expired certificates are not replaced with new or renewed certificates that cover the contractual period, the City shall:*

- A. Suspend the Agreement until such time as the new or renewed certificates are received by the City.
- B. The City may, at its sole discretion, terminate the Agreement for cause and seek damages from the Contractor in conjunction with the violation of the terms and conditions of the 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

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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 Engineer 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 Paragraph 11.2.1, 11.2.2 and 11.2.3 be observed by the City or inspected or tested by others, the Contractor at the City's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection testing and reconstruction if he 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

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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 Contracts Documents, including appropriate reduction in the Contract Price; or if the acceptance occurs after such recommendation, an appropriate amount shall be paid by the Contractor to the City.

11.8 City May Correct Defective Work: If the Contractor fails within a reasonable time after written notice of the Project Manager to proceed to correct defective Work or to remove and replace rejected Work as required by the Project Manager in accordance with Paragraph 11.5, or if the Contractor fails to perform the Work in accordance with the Contract Documents, the City may, after seven (7) days written notice to the Contractor, correct and remedy any such deficiency. In exercising its rights under this paragraph, the City shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, suspend the Contractor's services related thereto and take possession of the Contractor's tools, construction equipment and materials stored at the site or elsewhere. The Contractor shall allow the City's representative agents and employees such access to the site as may be necessary to enable the City to exercise its rights under this paragraph. All direct and indirect costs of the City in exercising such rights shall be charged against the Contractor in an amount verified by the Project Manager, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitation, compensation for additional professional services required and costs of repair and replacement of work of others destroyed or damaged by correction.

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removal or replacement of the Contractor's defective Work. The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the City of the City's right hereunder.

## ARTICLE 12 – INDEMNIFICATION

12.1 Disclaimer of Liability: The City shall not at any time, be liable for injury or damage occurring to any person or property from any cause, whatsoever, arising out of Contractor's construction and fulfillment of this agreement.

12.2 Indemnification: For other, additional good valuable consideration, the receipt and sufficiency of which is hereby acknowledged:

12.2.1 Contractor shall, at its sole cost and expense, indemnify and hold harmless the City, its representatives, employees and elected and appointed officials from or on account of all claims, damages, losses, liabilities and expenses, direct, indirect or consequential including but not limited to fees and charges of engineers, architects, attorneys, consultants and other professionals and court costs arising out of or in consequence of the performance of this Agreement at all trial and appellate levels. Indemnification shall specifically include but not be limited to claims, damages, losses, liabilities and expenses arising out of or from (a) the negligent or defective design of the project and Work of this Agreement; (b) any act, omission or default of the Contractor, its Subcontractors, agents, servants or employees; (c) any and all bodily injuries, sickness, disease or death; (d) injury to or destruction of tangible property, including any resulting loss of use; (e) other such damages, liabilities, or losses received or sustained by any person or persons during or on account of any operations connected with the construction of this Project including the warranty period; (f) the use of any improper materials; (g) any construction defect including both patent and latent defects; (h) failure to timely complete the work; (i) the violation of any federal, state, county or city laws, ordinances or regulations by Contractor, its subcontractors, agents, servants, independent contractors or employees; (j) the breach or alleged breach by Contractor of any term of the Agreement, including the breach or alleged breach of any warranty or guarantee.

12.2.2 Contractor agrees to indemnify, defend, save and hold harmless the City, its officers, agents and employees, from all damages, liabilities, losses, claims, fines and fees, and from any and all suits and actions of every name and description that may be brought against City, its officers, agents and employees, on account of any claims, fees, royalties, or costs for any invention or patent and/or for the infringement of any and all copyrights or patent rights claimed by any person, firm, or corporation.

12.2.3 Contractor shall pay all claims, losses, liens, settlements or judgments of any nature in connection with the foregoing indemnifications including, but not limited to, reasonable attorney's fees and costs for trials and appeals.

12.2.4 If any Subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on

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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 controls the extent and limits of the indemnification and hold harmless provisions of this Agreement, if any, and that the parties waive any defects in the wording of this Article that runs afoul of said statutory section.

### **ARTICLE 13 – CHANGES IN THE WORK**

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

## ARTICLE 14 – CHANGE OF CONTRACT PRICE

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

14.1 Cost of the Work: The term “Cost of the Work” means the sum of all direct costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by the City, these costs shall be in amounts no higher than those prevailing in the City and shall include only the following items and shall not include any of the costs itemized in Paragraph 14.3:

14.1.1 Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications agreed upon by the City and the Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus and cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker’s compensation, health and retirement benefits, bonuses, sick leave, vacation and applicable holiday pay.

14.1.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage, and required suppliers and field services. All cash discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the City, and the Contractor shall make provisions so that they may be obtained.

14.1.3 Supplemental costs including the following:

14.1.3.1 Cost, including transportation and maintenance of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work.

14.1.3.2 Rentals of all construction equipment and machinery and the parts whether rented from the Contractor or others in accordance with rental agreements approved by the City, and the costs of transporting, loading, unloading, installation, dismantling and removal. The rental of any such equipment, machinery or parts shall cease when the use is no longer necessary for the Work.

14.1.3.3 Sales, consumer, use or similar taxes related to the Work and for which the Contractor is liable, imposed by laws and regulations.

14.1.3.4 Royalty payments and fees for permits and licenses.

14.1.3.5 The cost of utilities, fuel and sanitary facilities at the Work site.

14.1.3.6 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

- 14.1.3.7 Cost of premiums for additional bonds and insurance required because of changes in the Work.

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

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

14.3.1 Payroll costs and other compensation of the Contractor's officers executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditor, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by the Contractor whether at the site or in the Contractor's principal or branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 14.1.1, all of which are to be considered administrative costs covered by the Contractor's fee.

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

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

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

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

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

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

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#### 14.4.1 A mutually acceptable negotiated fee:

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

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

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

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

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

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

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

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

## ARTICLE 15 – CHANGE OF THE CONTRACT TIME

- 15.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Project Manager within five (5) days of the occurrence of the event giving rise to the claim. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.
- 15.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made there for 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, 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 Contract, 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 \$200.00 **Two Hundred Dollars (\$200.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. Should an act of God or the acts or omissions of the City, its agents or representatives, in derogation to the terms of this Agreement cause the delay, the Contractor shall not be responsible for the delay nor liquidated damages. Liquidated damages are fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by the City as a consequence of such delay and both parties desiring to obviate any question of dispute concerning the amount of damages and the cost and effect of the failure of the Contractor to complete the Work on time. Liquidated damages shall apply separately to each portion of the Work for which a time of completion is given. The City shall have the right to deduct from or retain any compensation which may be due or which may become due and payable to the Contractor the amount of liquidated damages, and if the amount retained by the City is insufficient to pay in full such liquidated damages, the Contractor shall pay all

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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 commences a voluntary case or a petition is filed against the Contractor, under any chapter of the Bankruptcy Code, or if the Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency.
- 17.2.2 If the Contractor makes a general assignment for the benefit of creditors.
- 17.2.3 If a trustee, receiver, custodian or agent of the Contractor is appointed under applicable law or under Contract, whose appointment or authority is to take charge of property of the Contractor is for the purpose of enforcing a lien, or to take

against such property or for the purpose of general administration of such property for the benefit of the Contractor's creditors.

17.2.4 If Contractor fails to begin the Work within fifteen (15) calendar days after the Project Initiation Date, or fails to perform the Work with sufficient workers and equipment or with sufficient materials to ensure the prompt completion of the Work, or shall perform the Work unsuitably, or cause it to be rejected as defective and unsuitable, or shall discontinue the prosecution of the Work pursuant to the accepted schedule or if Contractor shall fail to perform any material term set forth in the Contract Documents, or from any other cause whatsoever shall not carry on the Work in an acceptable manner, Project Manager may give notice in writing to Contractor and its Surety of such delay, neglect or default, specifying the same.

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

17.2.6 If the Contractor repeatedly disregards proper safety procedures.

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

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

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

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

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

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



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

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

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

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

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

17.4.2.1 In the event the Contractor files a voluntary petition pursuant to 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303., the Contractor acknowledges that the commencement of a bankruptcy proceeding constitutes an event of default under the terms of this Agreement. Further, the Contractor acknowledges that this Agreement constitutes an executory contract within the meaning of 11 U.S.C. 365. The Contractor acknowledges that this Agreement is not capable of being assumed pursuant to 11 U.S.C. 365(c)(2), unless the

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City expressly consents in writing to the assumption. In the event the City consents to the assumption, the Contractor agrees to file a motion to assume this Agreement within ten (10) days after receipt of written consent from the City, regardless of whether the bankruptcy proceeding is pending under Chapter 7, 11, or 13 of Title 11 of the United States Code. The Contractor further acknowledges that this Agreement is not capable of being assigned pursuant to 11 U.S.C. 365(b)(1).

- 17.5 Termination for Convenience: This Contract may be terminated for convenience in writing by City upon thirty (30) days written notice to Contractor (delivered by certified mail, return receipt requested) of intent to terminate and the date on which such termination becomes effective. In such case, Contractor shall be paid for all work executed and expenses incurred prior to termination in addition to termination settlement costs reasonably incurred by Contractor relating to commitments which had become firm prior to the termination. Payment shall include reasonable profit for work/services satisfactorily performed. No payment shall be made for profit for work/services which have not been performed.
- 17.6 Where the Contractor's service have 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 Contract Administrator and Contractor shall be submitted to the Consultant for resolution. When either party has determined that a disputed question, claim, difficulty or dispute is at an impasse, that party shall notify the other party in writing and submit the question, claim, difficulty or dispute to the Consultant for resolution. The parties may agree to a proposed resolution at any time without the involvement and determination of the Consultant.
- 18.1.1 Consultant shall notify Contract Administrator and Contractor in writing of Consultant's decision within twenty-one (21) calendar days from the date of the submission of the question, claim, difficulty or dispute, unless Consultant requires time to gather information or allow the parties to provide additional information.
- 18.1.2 In the event the determination of a dispute by the Consultant under this Article is unacceptable to any of the parties hereto, the party objecting to the determination must notify the other party and the City Manager in writing within ten (10) days after receipt of the determination. The notice must state

the basis of the objection and the proposed resolution. Final resolution of such dispute shall be made by the City Manager. The City Manager's decision shall be final and binding on the parties.

18.1.3 All non-technical administrative disputes (such as billing and payment) shall be determined by Contract Administrator.

18.1.4 During the pendency of any dispute and after a determination thereof, Contractor, Consultant, 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.

18.1.5 For any disputes which remain unsolved, within sixty (60) calendar days after Final Completion of the Work, the parties shall participate in mediation to address all unresolved disputes. A mediator shall be mutually agreed upon by the parties. Should any objection not be resolved in mediation, the parties retain all their legal rights and remedies under applicable law. If a party objecting to a determination, fails to comply in strict accordance with the requirements of this Article, said party specifically waives all of its rights provided hereunder, including its rights and remedies under applicable law.

## ARTICLE 19 – NOTICES

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

To the City:

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

with copy to the:

Project Manager and City Attorney  
City of Fort Lauderdale  
100 North Andrews Avenue  
Fort Lauderdale, Florida 33301

To the Contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## ARTICLE 20 – LIMITATION OF LIABILITY

- 20.1 The City desires to enter into this Agreement only if in so doing the City can place a limit on the City's liability for any cause of action arising out of this Agreement, so that the City's liability for any breach never exceeds the sum of \$1,000. For other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Contractor expresses its willingness to enter into this Agreement with the knowledge that the Contractor's recovery from the City to any action or claim arising from the Agreement is limited to a maximum amount of \$1,000, which amount shall be reduced by the amount actually paid by the City to the Contractor pursuant to this Agreement, for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended either to be a waiver of the limitation placed upon the City's liability as set forth in Section 768.28, Florida Statutes, or to extend the City's liability beyond the limits established in said Section 768.28; and no claim or award against the City shall include attorney's fees, investigative costs, expert fees, suit costs or pre-judgment interest.
- 20.2 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any reason, allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.

## ARTICLE 21 – GOVERNING LAW

- 21.1 This Agreement shall be governed by the laws of the State of Florida. Both Parties agree that the courts of the State of Florida shall have jurisdiction of any claim arising in connection with this Agreement. Venue for any claim, objection or dispute arising out of this Agreement shall be in Broward County, Florida. **By entering into this Contract, Contractor and City hereby expressly waive any rights either party may have to a trial by jury or any civil litigation related to, or arising out of the Project. Contractor shall specifically bind all subcontractors to the provisions of this Contract.**

## 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

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

- 22.2 The Contractor shall not assign or transfer this Agreement or its rights, title or interests. The obligations undertaken by the Contractor pursuant to this Agreement shall not be delegated or assigned to any other person or firm. Violation of the terms of this Paragraph shall constitute a material breach of Agreement by the Contractor and the City any, at its discretion, cancel this Agreement and all rights, title and interest of the Contractor which shall immediately cease and terminate.
- 22.3 The Contractor and its employees, volunteers and agents shall be and remain an independent contractors 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 Scrutinized Companies: Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), that it is not engaged in a boycott of Israel, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2016), as may be amended or revised. 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 (2016), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), as may be amended or revised.

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215.4725, Florida Statutes (2016), 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 (2016), as may be amended or revised.

- 22.8 Public Entity Crimes: In accordance with the Public Crimes Act, Section 287.133, Florida Statutes, a person or affiliate who is a contractor, consultant or other provider, who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to the City, may not submit a bid on a contract with the City for the construction or repair of a public building or public work, may not submit bids on leases of real property to the City, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with the City, and may not transact any business with the City in excess of the threshold amount provided in Section 287.017, Florida Statutes, 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 Public Records

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

Contractor shall:

1. Keep and maintain public records that ordinarily and necessarily would be 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 (2016), 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 contract if the Contractor does not transfer the records to the City.

4. Upon completion of the Contract, 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 Contract, 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 Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

SAMPLE CONSTRUCTION AGREEMENT

441 NW 7 Avenue Sewer Extension  
(Contractor)  
Project 12203

CITY

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

CITY OF FORT LAUDERDALE, a municipal  
corporation of the State of Florida

By: \_\_\_\_\_  
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:

By: \_\_\_\_\_  
JEFFREY A. MODARELLI  
City Clerk

Approved as to Legal Form:

By: \_\_\_\_\_  
RHONDA MONTOYA HASAN  
Assistant City Attorney



**CONTRACTOR**

WITNESSES:

CONTRACTOR.,  
a Florida corporation.

\_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_  
Print Name\_\_\_\_\_  
PRINT NAME\_\_\_\_\_  
Title

ATTEST:

\_\_\_\_\_

BY: \_\_\_\_\_

\_\_\_\_\_  
Print Name\_\_\_\_\_  
PRINT NAME\_\_\_\_\_  
Secretary

(CORPORATE SEAL)

STATE OF FLORIDA:  
COUNTY OF BROWARD:

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2016, by  
 \_\_\_\_\_ (Name), as \_\_\_\_\_ (Title) of \_\_\_\_\_ (CONTRACTOR), a  
 Florida corporation, on behalf of the Corporation.

SEAL

\_\_\_\_\_  
Notary Public, State of Florida\_\_\_\_\_  
Name of Notary Typed, Printed or Stamped☐ Personally Known or ☐ Produced Identification:

Type of Identification Produced: \_\_\_\_\_

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## **GENERAL CONDITIONS**

**Unless otherwise modified in the projects special conditions, the following General Conditions shall be part of the Contract:**

**GC - 01 - DEFINITIONS** - The following words and expressions, or pronouns used in their stead, shall wherever they appear in the Contract and the Contract Documents, be construed as follows:

"Addendum" or "Addenda" - shall mean the additional Contract provisions issued in writing, by the Engineer, prior to the receipt of bids.

"Bid" – shall mean the offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

"Bidder" – shall mean any person, firm, company, corporation or entity submitting a Bid for the Work.

"Bonds" –shall mean Bid, performance and payment bonds and other instruments of security, furnished by Contractor and his surety in accordance with the Contract Documents.

"City" – shall mean the City of Fort Lauderdale, Florida, a Florida municipal corporation. In the event the City exercises its regulatory authority as a government body, the exercise of such regulatory authority and the enforcement of any rules, regulations, codes, laws and ordinances shall be deemed to have occurred pursuant to City's authority as a governmental body and shall not be attributable in any manner to the City as a party to this Contract. For the purpose of this Contract, "City" without modification shall mean the City Commission, and/or City Manager or his/her designee(s) as applicable.

"Construction Manager" - shall mean the Public Works Director or his/her designee.

"Construction Project Manager" - shall mean the Public Works Director or his/her designee.

"Consultant" – shall mean a person, firm, company, corporation or other entity employed by the City to perform the professional 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 except Extra Work as hereinafter defined, it being understood that, in case of any inconsistency in or between any part or parts of this Contract, the Public Works Director shall determine which shall prevail.

"Design Documents" – shall mean the construction plans and specifications included as part of a Bid/Proposal Solicitation prepared either by the City or by the Consultant under a separate Agreement with the City.

"Engineer" - shall mean the Public Works Director or his/her designee.

"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 the Public Works Director or his/her designee.

"Public Works Director" -shall mean the Public Works Director of the City of Fort Lauderdale, Florida or his/her designee(s).

"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 Public Works Director.

"Subcontractor" - 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, 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.

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.

The Contractor, on its own, has made or caused to be made examinations, investigations, tests and studies of reports and related data in addition to those referred above, as Contractor deemed necessary to perform the Work at the Bid price set by the Contractor, within the contract time and in accordance with the other terms and conditions of the Contract Documents and the Bid made by the Contractor; and no additional examinations, investigations, tests, reports or similar data are, or will be, required by Contractor to assure that the Work can be done at the Bid price set by the Contractor.

The Contractor further acknowledges that it has satisfied itself based on any geotechnical reports the City may provide and inspection of the project Site as to the character, quality, and quantity of surface and subsurface materials to be encountered from inspecting the site and from evaluating information derived from exploratory work that may have been done by the City or included in the

Contract Documents 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..

Any failure by the Contractor to acquaint itself with all the provided information and information obtained by visiting the project Site will not relieve Contractor from responsibility for properly estimating the difficulty or cost thereof under the Contract Documents. In the event that the actual subsurface conditions vary from the actual City provided reports, the Contractor shall notify the City and the Contract amount may be adjusted depending on the conditions, at the approval of the City.

**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 Bidder 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, in addition to the "Contractor's Request for Substitution" form provided by the Public Works Director. The following requirements shall be met in order for the substitution to be considered:

1. Requests for substitution shall reach the Public Works Director no less than ten (10) Working Days prior to the date set for opening of Bids; and
2. Requests for substitution shall be accompanied by such technical data, as the party making the request desires to submit. The Public Works Director will consider reports from reputable independent testing laboratories, verified experience records from previous users and other written information valid in the circumstances; and
3. 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
4. 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
5. 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; and

If a proposed substitution is approved by the Public Works Director, 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 - CONTROL OF THE WORK** - The Public Works Director shall have full control and direction of the Work in all respects. The Public Works Director 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 Public Works Director may desire respecting the quality of the Work and materials and the manner of conducting the Work. Should the Contractor be directed or 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 Public Works Director 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 Public Works Director, and no extra compensation shall be allowed to the Contractor therefore. In the event of night work, the Contractor shall furnish

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such light, satisfactory to the Public Works Director, as will insure 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.

The Contractor shall keep the Public Works Director informed, a reasonable time in advance, as to his need for grades and lines in order that the same may be furnished and all necessary measurements made for records and for payment with the minimum of inconvenience to the Public Works Director or of delay to the Contractor. The Contractor shall submit to the Public Works Director or Inspector on the job a written request outlining the streets, etc., for which the Contractor desires lines and grades. It is the intention not to delay the Work for the giving of lines and grades, but when necessary, work operations shall be suspended for such reasonable time as the Public Works Director may require for this purpose. However, such cost increases shall be authorized either by the City Manager and/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 - 05 - SUBCONTRACTOR** - The Contractor shall not sublet, in whole or any part of the Work without the written consent and approval of the Public Works Director. Within ten (10) days after official notification of starting date, the Contractor must submit in writing, to the Public Works Director, a list of all Subcontractors. No Work shall be done by any Subcontractor until such Subcontractor has been officially approved by the Public Works Director. A subcontractor not appearing on the original list will not be approved without written request submitted to the Public Works Director and approved by the Public Works Director. In all cases, the Contractor shall give his personal attention to the Work of the Subcontractors and the Subcontractor is liable to be discharged by the Contractor, at the direction of the Public Works Director, for neglect of duty, incompetence or misconduct.

Acceptance of any Subcontractor, other person, or organization by the Public Works Director shall not constitute a waiver of any right of Public Works Director to reject defective Work or Work not in conformance with the Contract Documents.

Contractor shall be fully responsible for all acts and omissions of his Subcontractors 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 Subcontractor 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 Subcontractor or other person, or organization, except as may otherwise be required by law.

**GC - 06 - QUANTITIES** - It is mutually agreed that the proposal shows the approximate amounts only along with the Plans and the general location. It is also mutually agreed that no change will 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 Public Works Director 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 City Manager and/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-07 - 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 - 08 - PERMITS AND PROTECTION OF PUBLIC** – 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 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.

The Contractor shall be required to observe all the ordinances in relation to obtaining permits for occupying, excavating, or in any way obstructing the streets and alleys. He shall erect and maintain barricades and sufficient safeguards around all excavations, embankments or obstructions; he shall place sufficient warning lights at or near the Work; keep the same burning from sunset to sunrise, employ watchmen, and strictly obey all laws and ordinances controlling or limiting those engaged in similar work.

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, and all the facilities, afforded the owners of such construction encountered or likely to be encountered, as will enable them to preserve the same from injury.

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.

Contractor shall not load nor permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

Where lifting operations involving the use of specialized cranes are required as part of construction, Contractor must make undertake the following investigation and submit the results and documentation to the Engineer prior to commencing any lifting operations: marking a very specific area in the field for the placement of the crane; a drawing showing the limitations of the job operation (i.e. not over adjacent properties or pedestrian and high vehicular traffic areas); underground utility exploration in the vicinity of the crane location, which may include ground penetrating radar to identify voids or old pipe or other subsurface features that could lead to sudden failure; assessment of the underlying soil and roadway materials and a worst case analysis based on entire load being distributed on just one or two outriggers; provision of properly sized pads under the outriggers; loading charts from manufacturer showing allowable configurations/loads; and inspection to make sure crane operation is in accordance with the permit conditions.

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**GC - 09 - DISEASE REGULATIONS** - The Contractor shall enforce all sanitary regulations and take all precautions against infectious diseases as the Public Works Director 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 - 10 - CONTRACTOR TO CHECK PLANS, SPECIFICATIONS, AND DATA** - The Contractor shall verify all dimensions, quantities, and details shown on the plans, supplementary drawings, schedules, or other data received from the Public Works Director, and shall notify the Public Works Director of all errors, omissions, conflicts and discrepancies found therein within three (3) working days of discovery. Failure to discover or correct errors, conflicts, or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory Work, faulty construction, or improper operation resulting there from nor from rectifying such condition at his own expense.

**GC - 11 - SUPPLEMENTARY DRAWINGS** - When, in the opinion of the Public Works Director, it becomes necessary to explain more fully the Work to be done, or to illustrate the work further, or to show any changes which may be required, drawings, known as supplementary drawings, with specifications pertaining thereto, will be prepared by the Public Works Director and copies will be given to the Contractor.

The supplementary drawings shall be binding upon the Contractor with the same force as the original Plans. Where such supplementary drawings require either less or more than the estimated quantities of work, credit to the City or compensations therefore to the Contractor shall be subject to the terms of the Contract.

**GC - 12 - MATERIALS AND WORKMANSHIP** - All material and workmanship shall, in every respect, be in conformity with approved modern practice and with prevailing standards of performance and quality. In the event of dispute the Public Works Director's decision shall be final. Wherever the Plans, specifications, Contract Documents, or the directions of the Public Works Director are unclear as to what is permissible and/or fail to note the quality of any Work, that interpretation will be made by the Public Works Director, which is in accordance with approved modern practice, to meet the particular requirements of the Contract.

In all cases, new materials shall be used, unless this provision is waived by notice from the City in writing.

**GC - 13 - SAFEGUARDING MARKS** - The Contractor shall safeguard all points, stakes, grade marks, monuments, and bench marks 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 surveyor if disturbed or destroyed during the course of construction.

**GC - 14 - EXISTING UTILITY SERVICE** - All existing utility service shall be maintained with a minimum of interruption at the expense of the Contractor.

**GC - 15 - 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 - 16 - 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 separate bodily injury and property damage insurance in the amounts as stated below. This insurance shall be taken out and maintained during the life of the Contract.

Bodily injury insurance in an amount not less than \$500,000.00 for injuries, including wrongful death to any one person, and subject to the same limit for each person, in an amount not less than \$1,000,000.00 on account of any one occurrence, and

Property damage insurance in an amount not less than \$500,000.00 for damages on account of any one occurrence and in an amount not less than \$1,000,000.00 for damages on account of all occurrences.

**GC - 17 - ACCIDENTS** - The Contractor shall provide such equipment and facilities as are necessary and/or required, in the case of accidents, for first aid services to be provided to a person who may be injured during the project duration. The Contractor shall also comply with the OSHA requirements as defined in the United States Labor Code 29 CFR 1926.50.

In addition, the Contractor must report immediately to the Public Works Director 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 - 18 - 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 - 19 - 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 cost of other parts of the Work.

Should the Contractor fail to abate a dust nuisance by the above methods, and then he will be required to immediately construct temporary patches per City standards.

**GC - 20 - PLACING BARRICADES AND WARNING LIGHTS** - The Contractor shall furnish and place, at his 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 Public Works Director 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 - 21 - TRAFFIC CONTROL** - The Contractor shall coordinate all Work and obtain, through the Engineering Department, any permits required to detour traffic or close any street before starting to work in the road. The following section: Part VI Traffic Controls for Street and Highway Construction and Maintenance Operations, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, U.S. Department of Transportation Federal Highway Administration, 2009, or current edition, shall be used as a guide for requirement and placement of traffic control devices, signs and barricades. The Public Works Director shall determine requirements for the above. The above publication is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. In the event that a Maintenance of Traffic (MOT) Plan is required, the Plan shall be prepared by an A.A.S.T.A. certified technician.

All traffic control devices, flashing lights, signs and barricades shall be maintained in working condition at all times.

**GC - 22 - COORDINATION** - The Contractor shall notify all utilities, transportation department, etc., in writing, with a copy to the Public Works Director before construction is started and shall coordinate his 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 his Work and dispose of his materials so as to not interfere with the operation of other Contractors engaged upon adjacent work and to join his Work to that of others in a proper manner and to perform his Work in the proper sequence in relation to that of other Contractors all as may be directed by the Public Works Director.

Each Contractor shall be responsible for any damage done by him or his agents to the work performed by another Contractor.

The Contractor shall contact the Broward County Transportation Department and the Florida Department of Transportation, as applicable, to verify and obtain location of any and all traffic conduits, loops, and street light underground services.

**GC - 23 - 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 - 24 - PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES** - Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), affirmed, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the “Cuba Amendment,” the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), that it is not engaged in a boycott of Israel, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2016), as may be amended or revised. 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 (2016), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), 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 (2016), as may be amended or revised.

**GC - 25 - LOCATION OF UNDERGROUND FACILITIES** - If the Proposer, for the purpose of responding to this solicitation, requests the location of underground facilities through the Sunshine State One-Call of Florida, Inc. notification system or through any person or entity providing a facility locating service, and underground facilities are marked with paint, stakes or other markings within the City pursuant to such a request, then the Proposer shall be deemed non-responsive to this solicitation in accordance with Section 2-184(5) of the City of Fort Lauderdale Code of Ordinances.

**GC - 26 – 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 – 27 – PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer’s response to the Solicitation is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 (“Public Records Law”). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this Solicitation and the Contract to be executed for this Solicitation, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer’s response to the Solicitation purporting to require confidentiality of any portion of the Proposer’s response to the Solicitation, except to the extent that certain information is in the City’s opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer

claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the Solicitation constitutes a Trade Secret. The City's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. Proposals purporting to be subject to copyright protection in full or in part will be rejected.

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, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

**Telephone Number:** (954) 828-5002

**Mailing Address:** City Clerk's Office  
100 N. Andrews Avenue  
Fort Lauderdale, FL 33301

**E-mail:** [prcontract@fortlauderdale.gov](mailto:prcontract@fortlauderdale.gov)

Contractor shall:

1. Keep and maintain public records that ordinarily and necessarily would be 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 (2016), 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 contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, 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 Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure

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requirements. If the Contractor keeps and maintains public records upon completion of this Contract, 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.

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**SECTION 01000 - SUMMARY OF WORK****PART 1 GENERAL****1.01 SCOPE****A. City of Fort Lauderdale**

1. City's Representative/Engineer: Dane M. Esdelle, MSCM, CGC, CMIT, Project Manager II
2. Project Description: This project consists of the construction of a new electrical service and meter as well as new site/lighting, consisting of 17 light poles and associated conduits and wiring at Provident Park. Calvin Giordano & Associates is the Design Consultant for this project.
3. Project Location: 1412 NW 6<sup>th</sup> Street, Fort Lauderdale, FL 33311
4. DESCRIPTION OF WORK  
The following is a general list of the work included. It is not intended to be complete. Consult the contract drawings and specifications for all contract requirements.
  - Mobilization
  - Pavement Marking & Signage
  - Demolition
  - Tree Protection
  - Root Pruning
  - Electric Service
  - Site Lighting
  - Site Restoration
  - Sodding

**1.03 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.

**1.04 SITE INVESTIGATION**

- A. The CONTRACTOR, by virtue of signing the Contract and any associated Task Orders, 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

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- 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. The CONTRACTOR, by virtue of signing the Contract and associated Task Orders, acknowledges that CONTRACTOR and subcontractors have satisfied themselves as to the nature and extent of soil and (underground) water conditions on the project site. No additional payment will be made to the CONTRACTOR because of differences between actual conditions and those included in the BID.

#### 1.05 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.

#### 1.06 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 any parking lot or park facilities, roadways, driveways, and utilities. Utilities shall include but not be limited to water, sewerage, drainage structures, ditches and canals, gas, electric, television, fiber optic lines, and telephone. Prior to commencing with the WORK, the 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, the CONTRACTOR shall also deliver written notice to the CITY'S 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.

#### 1.07 WORK SCHEDULE

- A. Time is of the essence in completing this project and each associated Task Order. 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 approved construction

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schedule submitted by the CONTRACTOR. If the CITY'S ENGINEER determines that the CONTRACTOR is behind schedule based on the approved schedule's critical path, or if the schedule does not meet the Critical Path Method (CPM) requirements 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 measures to complete the work in timely manner, including any overtime or other fees associated with required inspections, will be borne by the CONTRACTOR at no additional cost to the OWNER.

**B. REQUIRED PERIODS OF WORK SUSPENSION**

1. 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's website, however these include, but are not limited to New Year's Eve and Day, Martin Luther King's Birthday, Memorial Day, the 4<sup>th</sup> of July, Labor Day, Thanksgiving Day and the day after Thanksgiving Day, Christmas Eve and Christmas.
2. The CONTRACTOR shall include these provisions in the schedule required in 01311 and there shall be no additional time granted for these work suspensions.
3. No additional compensation shall be granted for demobilization, cleaning and remobilization as a result of these work suspensions.
4. 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.

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## C. SCHEDULE

1. CONTRACTOR shall submit scheduling information for the work noted in the Contract and/or each associated Task Order, as required in Section 013200 "Construction Progress Documentation".
2. No separate payment shall be made for preparation and/or revision of the schedule.

- D. 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. The Contractor will not permit overtime work or the performance of 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. If the Project Manager permits overtime work, 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 AM to 4:30 PM and any Work requiring inspection oversight being performed outside of this timeframe shall be paid for by the Contractor as Inspector overtime. 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

## 1.08 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 CITY 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.

## 1.09 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.



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### 1.10 POST AWARD KICK-OFF MEETING

- A. After the award of the Contract, a Post Award Kick-Off Meeting will be held between the CONTRACTOR, the CITY'S ENGINEER, City Staff and other interested parties. The ENGINEER will set the time and place of the conference. The purpose of this meeting is to communicate administrative and operational requirements of the Contract. The requirements for construction mobilization, quality, safety, and execution of the project will be explained and documented. Submittal requirements, project communications, schedule, quality and safety requirements will be outlined and dates set for submission of pre-construction submittals.

### 1.10 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.

### 1.11 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

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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 (or local 811), 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. The permits listed below will be obtained for the project by the CITY prior to beginning construction (when applicable). The CONTRACTOR is responsible for compliance with any and all permit conditions. In the event that the CITY must obtain permits in addition to those listed below, the CONTRACTOR shall not have any claim for damages arising from any delay caused by the CITY'S obtaining said additional permits.
  - a. City of Fort Lauderdale Building Department Permit – Plans shall be approved prior to Bidding but contractor to pull actual permit.
- G. CONTRACTOR shall obtain applicable construction permits with Local, County, and State prior to commencement of work.

#### 1.12 LINE AND GRADE

N/A

#### 1.13 PROTECTION AND RESTORATION OF SURVEY MONUMENTS

- A. The CONTRACTOR shall not be allowed to store any materials at the project site.

#### 1.14 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.

#### 1.15 STORAGE SITES

- A. The CONTRACTOR shall not be allowed to store any materials at the project site.

#### 1.16 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.

#### 1.17 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

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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.

#### 1.18 AUDIO-VISUAL PRECONSTRUCTION RECORD

##### A. General:

1. Prior to beginning any Contract or Task Order work, the CONTRACTOR shall thoroughly photograph or have a continuous color audio-video recording taken along the entire length of the project to serve as a record of preconstruction conditions.

#### 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.

1. Construction Phasing Requirements:  
Contractor shall follow phasing requirements shown on construction drawings. Contractor shall submit a written request to the City's Project Manager for approval to start work on each phase.

##### B. TRAFFIC CONTROL

1. 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.
2. The "Maintenance of Traffic" plan shall include pedestrian traffic as well as vehicular traffic.

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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.

3. The CONTRACTOR, at all times, shall conduct the work in such a manner as to insure 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 CITY'S ENGINEER.
4. 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.
5. All existing stop and street name signs will be maintained as long as deemed necessary by the CITY'S ENGINEER.
6. 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.
7. 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)**

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**PART 3 EXECUTION (Not Applicable)**

**END OF SECTION**

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**SECTION 01001 - GENERAL REQUIREMENTS****PART 1 PROJECT DESCRIPTION****1.01 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. Project specific drawings and specifications are made part of this Contract. If a conflict occurs within the plans and/or specifications then the most stringent requirement shall apply. Contractor shall immediately check furnished drawings and specifications and notify the CITY of any discrepancies.
- C. Project Environmental Goals: Contractor shall distribute copies of the Environmental Goals to each subcontractor and the City Engineer. The overall goal for design, construction, and operation is to produce a facility/building that meets the functional program needs and incorporates the principles of sustainability. Specifically:
  - 1. Preserve and restore the site ecosystem and biodiversity; avoid site degradation and erosion. Minimize offsite environmental impact.
  - 2. Use the minimum amount of energy, water, and materials feasible to meet the design intent. Select energy and water efficient equipment and strategies.
  - 3. Use environmentally preferable products and decrease toxicity level of materials used.
  - 4. Use renewable energy and material resources.
  - 5. Optimize operational performance (through commissioning efforts) in order to ensure energy efficient equipment operates as intended.
  - 6. Consider the durability, maintainability, and flexibility of building systems.
  - 7. Manage construction site and storage of materials to ensure no negative impact on the indoor environmental quality of the building.
  - 8. Reduce construction waste through reuse, recycling, and supplier take-back.
- D. 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 ENGINEER, 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.

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- E. Occupancy of Premises: The Park will be occupied during performance of work under this Contract. Before work is started, the Contractor shall arrange with the CITY ENGINEER a sequence of procedure, means of access, use of approaches and any potential impacts to traffic and/or installation operations.
- F. Existing Work: In addition to requirements to protect existing vegetation, structures, equipment, utilities or other improvements, remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which will remain. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the CITY'S ENGINEER. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.
- G. The following additional information, though not all-inclusive, is given to assist contractors in their evaluation of the work required to meet the project objectives.

## **PART 2 SEQUENCE OF OPERATIONS**

### **2.01 SCHEDULING**

- A. General: Prepare and submit schedule in accordance with the provisions of Section 01311, Construction Progress Documentation.
- B. 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 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.
- C. 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 CITY. The Contractor shall have sufficient manpower, equipment, and material to complete the project.
- D. No work shall commence without express consent of the CITY.
- E. 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.
- F. Special Scheduling Requirements: Have materials, equipment, and personnel required to perform the work at the site prior to the commencement of the work. The

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Contractor shall conduct his operations so as to cause the least possible interference with normal operations of the activity. Permission to interrupt any Activity roads, railroads, and/or utility service shall be requested in writing a minimum of 15 calendar days prior to the desired date of interruption. The work under this Contract may require special attention to the scheduling and conduct of the work in connection with existing operations.

## 2.02 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.

## 2.03 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.

## 2.05 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

## 3.01 SITE INVESTIGATION AND REPRESENTATION

- A. 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, 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.
- B. 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.
- C. 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,

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and (2) the Contract expressly provides that the responsibility therefore is assumed by the City.

### 3.02 INFORMATION ON SITE CONDITIONS

- A. General: Information obtained by the CITY regarding site conditions and existing construction of site facilities, as applicable, and similar data will be available for inspection at the office of the CITY upon request. Such information is offered as supplementary information only. The CITY does not assume any responsibility for the completeness or interpretation of such supplementary information.

### 3.03 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 visit [www.callsunshine.com](http://www.callsunshine.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.

### 3.04 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.
- B. 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.
- C. 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.
- D. 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.
- E. 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

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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.

- F. 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, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense.
- G. 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.

### 3.05 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.

## PART 4 SAFETY AND CONVENIENCE

### 4.01 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 un-ramped grade changes in pedestrian sidewalk or walkway, and trenches or excavations in park. 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.
- 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.

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- C. All work shall be done in a safe manner and in strict compliance with all requirements of the Federal Occupational Safety and Health Act (OSHA), The Florida Trench Safety Act and all other State and local safety and health regulations.

#### 4.02 ACCIDENT REPORTS

- A. In addition, the Contractor must promptly report in writing to the CITY 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 CITY.
- 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, giving full details of the claim.

#### 4.03 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.

#### 4.04 PROTECTION OF PROPERTY

- A. The Contractor shall identify and isolate his active work zone in such a manner as to exclude all personnel not employed by him or the City.

#### 4.05 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 Building Construction Operations (NFPA No. 241) shall be followed.

#### 4.06 ACCESS FOR POLICE, FIRE, AND POSTAL SERVICE

- A. The Contractor shall leave a night emergency telephone number or numbers with the police department, the City's Project Manager, and the Owner, so that contact may be made easily at all times in case of barricade and flare trouble or other emergencies.

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**PART 5 PRESERVATION, RESTORATION, AND CLEANUP****5.01 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 as specified in Section 16050 Basic Electrical Materials and Methods, raked and graded to conform to their original contours.

**5.02 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.

**5.03 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 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****6.01 GENERAL**

- A. City has prepared the following application for the Contractor to submit and obtain Permit:
  - a. City of Fort Lauderdale-Building Permit
- B. Permits to be obtained by the Contractor include, but are not limited to the following:

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- a. Local, County, and State contracting licenses.
- C. The Contractor shall comply with all applicable permit conditions.

## PART 7 EXECUTION

### 7.01 PRE-CONSTRUCTION RESPONSIBILITIES

Upon receipt of the Notice To Proceed, the Contractor shall arrange for a Pre-Construction meeting. The meeting shall be held with a minimum of one weeks' notice and shall include the Engineer, the Owner and Representatives for all affected utility companies including but not limited to:

COMPANY	CONTACT	TELEPHONE
City of Fort Lauderdale	Jon Stahl Rick Johnson	(954) 828-7830 (954) 828-7809
FPL	Tracy Stern	(800) 868-9554
Sunshine State One Call		(800) 432-4770

### 7.02 TEMPORARY UTILITIES

- A. The Contractor shall be responsible to arrange for and supply all temporary utilities including, but not limited to, water, sewer and electricity.
- B. The cost of temporary utilities shall be considered incidental to the cost of the Work and is therefore included in the Bid.

### 7.03 DISPOSAL

- A. Do not dispose of any unsuitable fill, hazardous or organic material onsite. All such material shall be disposed of in a legal manner by the Contractor, the cost of which shall be included in the Bid.

### 7.04 TREES AND LANDSCAPING WITHIN PROJECT LIMITS

- A. General: The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or landscaping on the project site, and shall not trim or remove any trees or landscaping unless such trees or landscaping have been approved for trimming or removal by the jurisdictional agency or owner. All existing trees or landscaping which are damaged during construction shall be replaced by the CONTRACTOR or a certified tree/landscaping company to the satisfaction of the owner.
- B. Replacement: The CONTRACTOR shall immediately notify the jurisdictional agency or owner if any tree or landscaping is damaged by the CONTRACTOR's

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operations. If, in the opinion of the jurisdictional agency or owner, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree or landscaping at its own expense. The tree or landscaping shall be of a like size and variety as the tree or landscaping damaged, or, if of a smaller size, the CONTRACTOR shall pay any compensatory payment.

#### 7.05 EXISTING IRRIGATION

- A. All existing irrigation systems (if not shown on irrigation plans) within the area of the Work shall be restored to original condition or better and adjusted to finished grade. The cost of repairs and/or adjustment to existing irrigation shall be considered incidental to the cost of the Work and is therefore included in the Bid.

#### 7.06 DEMOLITION

- A. Limits of demolition which may be shown in the Contract Documents are general in nature. Actual limits of demolition shall be as determined by the field conditions in conformance with the requirements of the Work.

**END OF SECTION**

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**SECTION 01005 - TECHNICAL PROVISIONS****PART 1 GENERAL****1.01 SCOPE**

- A. Work under this contract includes furnishing materials, labor, tools equipment, supervision and incidentals necessary to construct lighting improvements.

**1.02 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.

**1.03 FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS**

- A. After completion of construction, the CONTRACTOR shall provide a minimum of two hardcopy and electronic (PDF plots and DWG drawing files) sets of As-Built Drawings, drafted in electronic (AutoCAD) format, 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 or a licensed Professional Engineer registered in the State of Florida. All elevations shall refer to N.A.V.D. 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 other permitting agencies, as applicable.

**1.04 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.

**1.05 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.

**1.06 WATER SUPPLY**

- A. 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

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shall make all arrangements and incur all expense involved in having the CITY furnish and install the necessary water meters. Each water service line shall be provided with a vacuum relief or backflow preventer which shall meet the requirements of ASA A40.6, latest revision, and the local administrative authority.

#### 1.07 MAINTENANCE

- A. N/A

#### 1.08 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.

#### 1.09 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 010700, "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. N/A



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### 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. N/A

### 1.15 ADJUSTMENT AND RELOCATION OF EXISTING LINES

- A. N/A

### 1.16 CONNECTION TO EXISTING SYSTEM

- A. N/A

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### 1.17 RELOCATIONS

- A. N/A

### 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.
- C. The CONTRACTOR shall provide three (3) copies (Two (2) hard copies and one (1) electronic copy on CD-ROM) of all Operation and Maintenance Manuals for any installed equipment or materials.
- D. The CONTRACTOR shall provide initial operation and maintenance training for any installed equipment and materials to CITY STAFF.

### 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.

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## 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 Mobilization item that is included in the Bid.

## 1.23 VIBRATORY COMPACTION

- A. N/A.

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**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**

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**SECTION 01012 – NOT IN CONTRACT (N.I.C.) ITEMS****PART I GENERAL****1.01 RELATED DOCUMENTS**

- A. All applicable provisions of the Contract Requirements and Division I - General Requirements shall govern the work under this section.

**1.02 ITEMS TO BE PROVIDED UNDER SEPARATE CONTRACTS**

- A. The following items of work are not included in the Contract (N.I.C. ITEMS) and shall be executed under separate contracts directly by the OWNER, other public entities, or other utilities:

Future Site Furnishings

- B. All other items indicated on the Drawings as N.I.C. ITEMS, and any items listed in the proposal form as N.I.C. ITEMS.

**PART 2 PRODUCTS (Not Applicable)****PART 3 EXECUTION (Not Applicable)****END OF SECTION**

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**SECTION 01025 - MEASUREMENT AND PAYMENT****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. This Section includes administrative and procedural requirements for determining Work completed under the Lump Sum price contract.

**1.02 RELATED SECTIONS**

- A. Section 00300 – Bid Form
- B. Section 01030 – Special Project Procedures
- C. Section 01152 – Applications for Payment
- D. Section 01370 – Schedule of Values
- E. Other Sections as applicable.

**1.03 REFERENCE STANDARDS**

- A. Manual of Uniform Traffic Control Devices (MUTCD)
- B. FDOT Standard Specification for Road and Bridge Construction (Standard Specifications)
- C. FDOT Design Standards for Design, Construction, Maintenance and Utility Operations in the State Highway System (Standard Indexes)
- D. Broward County Public Works and Transportation Department, Highway Construction and Engineering Division Minimum Standards

**1.04 GENERAL REQUIREMENTS**

- A. Prices shall include all costs required for the completed, in-place construction of the specified unit of work. This may include but not be limited to, materials and delivery; cost of installation; incidentals; labor including social security, insurance, and other required fringe benefits; workman's compensation insurance; bond premiums; rental of equipment and machinery; taxes; surveys; incidental expenses; and supervision.
- B. Installation, acceptance and payment shall be in accordance with the REFERENCE STANDARDS.
- C. The City reserves the right to reject the Contractor's measurement of completed work that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the City's expense.

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- D. Contract Sum adjustments will be by Change Order on basis of net accumulative change for each unit price category.
  - 1. Except as otherwise specified, unit prices shall apply to both deductive and additive variations of quantities.
  - 2. Lump sum and unit prices in the Agreement shall remain in effect until date of final completion of the entire Work.
- E. Partial payment for material and equipment properly stored and protected will be made in accordance with requirements of the General Conditions.
- F. No separate payment will be made for Record Drawings.
- G. Abbreviations:
  - 1. Acre - AC
  - 2. Allowance - AL
  - 3. Cubic Yard - CY
  - 4. Each - EA
  - 5. Furnish and Install - F & I
  - 6. Gallons - GA
  - 7. Gross Mile - GM
  - 8. Linear Feet – LF
  - 9. Lump Sum - LS
  - 10. Million Gallons – MG
  - 11. Net Mile - NM
  - 12. Square Foot – SF
  - 13. Square Yard – SY
  - 14. Ton - TN

## PART 2 - PRODUCTS (NOT APPLICABLE)

## PART 3 - EXECUTION

### 3.01 MEASUREMENT AND PAYMENT

- A. Payment shall constitute full compensation and will be made as indicated in the RELATED SECTIONS.
- B. The Contractor shall submit a Schedule of Values for Engineer approval in accordance with Section 01370 prior to the first Application for Payment.
- C. The quantity approved for payment shall be either:

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1. Percentage of the Lump Sum price - A percentage of the lump sum price equivalent to the percentage of the project completion as determined by the Engineer as of the date of the pay request submitted. The percent completion of the project shall be based on the percent of the total project actually constructed and not on the percent of the Contract price completed.
2. Measured Quantities - The actual quantities in-place and accepted as measured by the Engineer on the date of the pay request submitted in the units specified in the bid form or schedule of values.

### 3.02 PROTECTION

- A. Where pavement, pipes, valves, appurtenances, trees, shrubbery, fences, other property or structures are in proximity to the WORK, adequate protection shall be provided. Such protection is considered incidental to construction and shall not be assigned to any pay item.

### 3.03 RESTORATION

- A. Where pavement, pipes, valves, structures, appurtenances, trees, shrubbery, fences, other property or structures not designated as pay items, have been damaged, removed or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the Contract Documents, state laws, municipal ordinances or the specific direction of the Engineer, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired at the expense of the Contractor to a condition equal to that before work began within a time frame approved by the Engineer. Such restoration is considered incidental to construction and shall not be assigned to any pay item.

### 3.04 DESCRIPTION OF BID ITEMS:

#### A. BASE BID – INSTALLATION OF NEW SITE LIGHTING AND ELECTRICAL SERVICE:

1. Construct all of the Work contained in the Contract Documents for the site lighting and electrical improvements shown in the plan sheets. The Work also includes the root pruning of some existing trees and the demolition of an existing electrical service. This shall also include any mobilization, demobilization, and maintenance of traffic costs. Mobilization and demobilization items shall include any insurance, bond, license and other miscellaneous administrative costs, and all other costs to the Contractor not specifically identified in the costs of other work under the Contract. No additional payment shall be made for transportation, communications, office maintenance, project signs, and any other incidental work, or services. No further payment shall be made for remobilization unless all of the work is suspended by the Engineer for a period in excess of three (3) months and through no fault to the Contractor. Please note that payment item for mobilization shall not exceed five percent (5%) of the contract price. Payment shall be made based on a percentage of the Lump Sum price.

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**2. ALLOWANCE ITEM – PERMIT FEES.**

Payment for this item shall be made at the amount that will be determined at the time of permitting by the Contractor. The figure of \$10,000.00 is included as an allowance and will be adjusted to the actual amount of the fees with approval from the Engineer and the City.

**END OF SECTION**

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**SECTION 01030 - SPECIAL PROJECT PROCEDURES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. This Section provides for provisions which are specific to the Work.

**1.02 RELATED SECTIONS**

- A. Section 01015 – General Requirements
- B. Other Sections as applicable.

**1.03 OBSTRUCTIONS**

- A. The attention of the Contractor is drawn to the fact that during digging at the Project site, the possibility exists of the Contractor encountering water, sewer, petroleum, gas, telephone, electrical, or other utility lines not shown on the Drawings. The Contractor is responsible for obtaining utility locations from the utility Citys or utility locate company. The Contractor shall exercise extreme care before and during digging to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, The Contractor shall repair the line at the no cost to the City.
- B. The Contractor shall be responsible for uncovering and exposing existing utilities sufficiently in advance of pipe laying operations to confirm elevation, size, material and clearance separation(s). If, upon excavation, an existing utility is found to be in conflict with the proposed construction or be of a size or material different from what is shown on the plans, the Contractor shall immediately notify the Engineer, who will in turn prepare a recommendation. Failure of the Contractor to perform the advance investigation shall not relieve it of any claims for delay or damages.

**1.04 PROVISIONS FOR THE CONTROL OF DUST**

- A. Sufficient precautions shall be taken during construction to minimize the amount of dust created. Appropriate precaution may include wetting down the site or other action as directed by the Engineer to prevent dust as a result of vehicular traffic.

**1.05 SALVAGE**

- A. Any existing equipment or material, including but not limited to, motors, electrical components or controls,, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction under this project may be designated as salvage by the Engineer or City, and, if so, shall be removed or excavated, if necessary, and delivered to the City at a location directed by the City. Any equipment or material not worthy of salvaging, as directed by the City, shall be disposed of by the Contractor at a suitable location.

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#### 1.06 MAINTENANCE OF EXISTING WATER, WASTEWATER, DRAINAGE FACILITIES OPERATION

- A. N/A

#### 1.07 UTILITY CROSSINGS

- A. N/A

#### 1.08 CONNECTIONS TO EXISTING SYSTEMS

- A. N/A

#### 1.09 RELOCATIONS

- A. The Contractor shall be responsible for the relocation of structures, including but not limited to, light poles, signs, sign poles, fences, piping, irrigation conduits, and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid for the project and shall not result in any additional cost to the City.

#### 1.10 WARRANTIES

- A. All warranties shall be in accordance with Section 01740.
- B. All warranties and bonds shall be submitted prior to the issuance of final payment.

#### 1.11 HURRICANE PREPAREDNESS PLAN

- A. Within thirty days of the date of Notice to Proceed, the Contractor shall submit to the Engineer and City a Hurricane Preparedness Plan. The plan should outline the necessary measures that the Contractor proposes to perform at no additional cost to the City in case of a hurricane warning. The plan shall detail these measures with specific action items defining responsible personnel.
- B. In the event of inclement weather, or whenever Engineer shall direct; Contractor will cause Subcontractors to protect carefully the Work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of Contractor or any Subcontractor to so protect the Work, such Work and materials shall be removed and replaced at the expense of the Contractor.

#### 1.12 EQUIPMENT, TESTING & INSPECTION

- A. Regardless of the number of days specified in the individual sections for the manufacturer's representative to be present on the site for inspection and testing, if the equipment fails to perform as specified, then the representative shall remain on site until the malfunction is corrected.
- B. The cost for the additional days shall not be added to the cost for the City, but shall be to the account of the Contractor.

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1.13 ADJACENT PROPERTY CITY NOTIFICATION

A. N/A

1.14 RIGHT-OF-WAY'S

A. N/A

1.15 PROTECTION OF STREET OR ROADWAY MARKERS

A. N/A

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION**

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**SECTION 01045 - CUTTING AND PATCHING****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Contractor shall be responsible for all cutting, fitting and patching required to complete the work or to:
  - 1. Make its several parts fit together properly.
  - 2. Uncover portions of the Work to provide for installation of ill-timed work.
  - 3. Remove and replace defective work.
  - 4. Remove and replace work not conforming to requirements of Contract Documents.
  - 5. Remove samples of installed work as specified for testing.
  - 6. Investigate subsurface conditions or utilities.

**1.02 RELATED SECTIONS**

- A. Section 01010: Summary of Work
- B. Other Sections as applicable.

**1.03 SUBMITTALS**

- A. Submit a written request to the Engineer in advance of executing any cutting or alteration which affects:
  - 1. Work of the Owner or any separate contractor.
  - 2. Structural value or integrity of any element of the Project.
  - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
  - 4. Efficiency, operational life, maintenance or safety of operational elements.
  - 5. Visual qualities of sight-exposed elements.

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- B. Request shall include:
1. Identification of the Project.
  2. Description of affected work.
  3. The necessity for cutting, alteration or excavation.
  4. Effect on work of Owner or any separate contractor, or on structural or weatherproof integrity of Project.
  5. Description of proposed work:
    - a. Scope of cutting, patching, alteration, or excavation.
    - b. Trades who will execute the work.
    - c. Products proposed to be used.
    - d. Extent of refinishing to be redone.
  6. Alternatives to cutting and patching.
  7. Cost proposal, when applicable.
  8. Written permission of any separate contractor whose work will be affected.
- C. Submit written notice to the Engineer designating the date and the time work will be uncovered.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Comply with specifications and standards for each specific project involved.

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting or patching.
- B. After uncovering work, inspect conditions affecting installation of Products, or performance of work.
- C. Report unsatisfactory or questionable conditions to the Engineer in writing; do not proceed with work until the Engineer has provided further instructions.

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**3.02 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.

**3.03 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 cutting methods which will prevent settlement or damage to other work.
- C. Employ original Installer or Fabricator to perform cutting and patching for:
  - 1. Weather-exposed or moisture-resistant surfaces.
  - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed Work in accord 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:
  - 1. For continuous surfaces, refinish to nearest intersection.
  - 2. For an assembly, refinish entire unit.

**END OF SECTION**

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**SECTION 01050 - FIELD ENGINEERING AND SURVEYING****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Provide and pay for field engineering and surveying services required for Project as follows:
  - 1. Surveying work required for the lay-out and execution of Work.
  - 2. Surveying work required to identify and maintain existing control points, bench marks and property line corners.
  - 3. Surveying work required to verify existing utility locations.
  - 4. Surveying work as required to create Project Record Documents.
  - 5. Civil, structural, or other professional engineering services specified, or required to execute the Contractor's construction methods.
  - 6. Testing, sampling, calibrating and training services specified, or required to execute the Contractor's construction methods including soils, concrete, material, etc.

**1.02 RELATED SECTIONS**

- A. Section 01410 – Materials and Installation Testing
- B. Section 01720 - Project Record Documents
- C. Other Sections as applicable.

**1.03 QUALIFICATIONS OF PROFESSIONAL**

- A. Florida Registered Professional Surveyor and Mapper, acceptable to the City and the Engineer.
- B. Florida Registered Professional Engineer(s) of the specialty required for on the Project, acceptable to the City and the Engineer.

**1.04 SURVEY REFERENCE POINTS**

- A. Horizontal and vertical control points for the Project are to be established by the Engineer and provided to the Contractor.
- B. Locate and protect control points prior to starting work, and preserve all permanent reference points during construction.



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1. Make no changes or relocations without prior written notice to the Engineer.
2. Report to the Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
3. Require surveyor to replace project control points which may be lost or destroyed.
  - a. Establish replacements based on original survey control.

#### 1.05 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two temporary bench marks on site, referenced to data by survey control points.
  1. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out, by instrumentation and similar appropriate means:
  1. Site Improvements
    - a. Line and grade of pipe and structure installation; top of pipe, invert, slope, etc.
    - b. Grading for fill and topsoil placement, roadway sub-base and base installation.
  2. Controlling lines and levels required for all trades.
- C. From time to time, verify layouts by same methods.

#### 1.06 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses in accordance with Section 01720.

#### 1.07 SUBMITTALS

- A. Submit name and address of Professional Surveyor and Mapper or Professional Engineer to the Engineer.
- B. On request of the Engineer, submit documentation to verify accuracy of field engineering work.
- C. Submit certificate signed by registered surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.
- D. Submit Project Record Documents in accordance with Section 01720.

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**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION****3.01 ADVANCE INVESTIGATIONS**

- A. The Contractor shall be responsible for uncovering and exposing existing utilities sufficiently in advance of pipe laying operations to confirm elevation, size, material and clearance separation(s). If, upon excavation, an existing utility is found to be in conflict with the proposed construction or be of a size or material different from what is shown on the plans, the Contractor shall immediately notify the Engineer, who will in turn prepare a recommendation. Failure of the Contractor to perform the advance investigation shall not relieve it of any claims for delay or damages.

**END OF SECTION**

**SECTION 01090 - REFERENCES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Applicable Publications: 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.
- B. Specialists, Assignments: 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 assignments 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. The final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

**1.02 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 the following documents to the extent that the provisions of such documents are not in conflict with the requirements of these Specifications nor the applicable codes.
- B. References herein to "Building Code" or SFBC shall mean the South Florida Building Code, Broward Edition. The latest edition of the code as approved and used at the local agency having jurisdiction, shall apply to the WORK herein, including, all addenda, modifications, amendments, or other lawful changes thereto.
- C. In case of conflicts between codes, reference standards, drawings and other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarifications and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall bid the most stringent requirements.
- D. Applicable Standard Specifications: The CONTRACTOR shall construct the WORK specified herein in accordance with the requirements of the Contract

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Documents and the referenced portion of those referenced codes, standards, and specifications listed herein; except, that wherever references to "Standard Specifications" are made, the provisions therein for measurement and payment shall not apply.

- E. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations, 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.

### 1.03 TRADE NAMES AND ALTERNATIVES

- A. For convenience in designation in the Contract Documents, materials to be incorporated in the WORK may be designated under a trade name or the name of a manufacturer and its catalog information. The use of alternative material which is equal in quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements:
  - 1. The burden of proof as to the quality and suitability of such alternative equipment, products, or other materials shall be upon the CONTRACTOR.
  - 2. The ENGINEER will be the sole judge as to the comparative quality and suitability of such alternative equipment, products, or other materials and its decisions shall be final.
  - 3. Base Bid requirements outlined in the Supplement to Bid Form, shall supersede any language contained hereinafter.
- B. Whenever in the Contract Documents the name or the name and address of the manufacturer or distributor is given for a product or other material, or if any other source of a product or material is indicated therefore, such information is given for the convenience of the CONTRACTOR only, and no limit, restriction, or direction is indicated or intended thereby, nor is the accuracy or reliability of such information guaranteed. It shall be the responsibility of the CONTRACTOR to determine the accurate identity and location of any such manufacturer, distributor, or other source of any product or material called for in the Contract Documents.
- C. The CONTRACTOR may offer any material, process, or equipment which it considers equivalent to that indicated. Unless otherwise authorized in writing by the ENGINEER, the substantiation of offers of equivalency must be submitted within 30 days after execution of the Agreement. The CONTRACTOR, at its sole expense, shall furnish data concerning items it has offered as equivalent to those specified. The CONTRACTOR shall have the material as required by the ENGINEER to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the items will fulfill its intended function. Installation and use of a substitute item shall not be made until accepted by the ENGINEER. If a substitute offered by the CONTRACTOR is found to be not equal to the specified

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material, the CONTRACTOR shall furnish and install the specified material.

- D. The CONTRACTOR'S attention is further directed to the requirement that failure to submit data substantiating a request for the substitution of an "or equal" item within said 30-day period after the execution of the Agreement, shall be deemed to mean that the CONTRACTOR intends to furnish one of the specific brand-named products named in the specification, and the CONTRACTOR does hereby waive all rights to offer or use substitute products in each such case. Wherever a proposed substitute product has not been submitted within said 30-day period, or wherever the submission of a proposed substitute product fails to meet the requirements of the specifications and an acceptable resubmittal is not received by the ENGINEER within said 30-day period, the CONTRACTOR shall furnish only one of the products originally-named in the Contract Documents.

#### 1.04 ABBREVIATION

- A. Wherever in these specifications references are made to the standards, specifications, or other published data of the various national, regional, or local organizations, such organizations may be referred to by their acronyms or abbreviation only. As a guide to the user of these specifications, the following acronyms and abbreviations which may appear in these specifications shall have the meanings indicated herein.

#### 1.05 ABBREVIATIONS AND ACRONYMS

- A. Abbreviations and acronyms contained in the Contract Documents may include, but not be limited to, the following:

AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of the State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACPPA	American Concrete Pressure Pipe Association
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGA	American Gas Association
AGC	Associated General Contractors
AGMA	American Gear Manufacturer's 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 Movement and Control Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute

APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	Acoustical Society of America
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
ASPE	American Society of Plumbing 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 and Code Administrators International
BHMA	Builders Hardware Manufacturers Association
CBM	Certified Ballast Manufacturers
CEMA	Conveyors Equipment Manufacturers Association
CGA	Compressed Gas Association
CLPCA	California Lathing and Plastering Contractors Association
CLFMI	Chain Link Fence Manufacturers Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DCDMA	Diamond Core Drill Manufacturers Association
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
HI	Hydraulic Institute
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronic 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 Manufacturers Association
MPTA	Mechanical Power Transmission Association
MTI	Marine Testing Institute
NAAM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electric Code

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NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NGLI	National Grease Lubricating Institute
NMA	National Microfilm Association
NRCA	National Roofing Contractors Association
NWMA	National Woodwork Manufacturers Association
NWWA	National Water Well Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast Concrete Institute
PDI	Plumbing and Drainage Institute
RIS	Redwood Inspection Service
RVIA	Recreational Vehicle Industry Association
RWMA	Resistance Welder Manufacturers Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SBC	Southern Building Code Congress International, Inc. (SBCCI)
SIS	Swedish Standards Association
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPR	Simplified Practice Recommendation
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
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.
USGS	United States Geological Survey
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WIC	Woodwork Institute of California
WPCF	Water Pollution Control Federation
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION**

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## SECTION 01150 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
  - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 2. Other Sections as applicable.
- C. BASIS OF PAYMENT - The price for each items shall include the furnishing of all labor, materials, equipment and incidentals required to complete the construction and to repair in a manner satisfactory to the Engineer any and all damage, as a result of work under this contract, done to existing structures, pavement, 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 or driveways and including all above and underground obstructions not specifically named here-in: replacing in a manner satisfactory to the Engineer and or all of the above items which may be damaged beyond repair as a result of work under this contract: performing the work necessary to complete any and all special connections, hangers, supports, bracing, blocking, shoring and patching necessary to complete the contract in a finished workmanlike manner ready for operation.
- D. Retainage: The City shall retain a portion of each partial payment according to the following schedule:
  - 1. The City will retain ten percent (10%) of all monies earned by Contractor until the work is fifty percent (50%) complete.
  - 2. After the work is fifty percent (50%) complete, the City will retain five percent (5%) of all monies earned by Contractor until project is complete and final payment is issued.

#### 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.

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of



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## Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
    - a. City's Form - Periodic Estimate for Partial Payment.
    - b. Submittals Schedule.
    - c. Contractor's Construction Schedule.
  2. Submit the Schedule of Values to City Representative at earliest possible date but no later than **seven (7)** days before the date scheduled for submittal of initial Applications for Payment.
  3. Sub-schedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Project Number
    - c. Contractor's name and address.
    - d. Date of submittal.
  2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
    - a. Related Specification Section or Division.
    - b. Description of the Work.
    - c. Name of subcontractor.
    - d. Name of manufacturer or fabricator.
    - e. Name of supplier.
    - f. Change Orders (numbers) that affect value.
    - g. Dollar value.
      - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
  3. 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.
  4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
  5. 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.

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- a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
6. 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.
7. 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.
8. 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.
  - a. 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 Conditions expense, at Contractor's option.
9. 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 updated project schedule. The schedule must show the originally accepted construction schedule and milestone and the current percentage complete for each using a gphant chart format. A vertical red line should indicate that progress date. The project's critical path should be clearly indicated by red bars. Any approved change orders should be reflected in the 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.
  1. Starting with the second (2nd) pay request and for each and every pay request thereafter, the General Contractor shall submit partial release of liens from all Subcontractors, suppliers, and laborers covering the preceding month's request (SEE FOLLOWING EXAMPLE).
  2. EXAMPLE: In the first (1st) pay request, payment is requested by General Contractor for the asbestos contractor and the electrician. The General Contractor must attach his partial release of lien.
  3. For the second (2nd) pay request, the General Contractor must attach his partial release of lien from the 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

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with the releases from the Subcontractors, suppliers, etc., until the final pay request.

- E. 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.
- F. 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
- G. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by City.
- H. Payment Application Forms: Use City Form "PERIODIC ESTIMATE FOR PARTIAL PAYMENT" as form for Applications for Payment.
  - 1. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action.
  - 2. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  - 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- I. Release of Lien: With each Application for Payment, submit release of lien from every entity lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
  - 1. Submit partial release of lien on each item for amount requested in previous application, after deduction for retainage, on each item.
  - 2. When an application shows completion of an item, submit final release of lien.
  - 3. City reserves the right to designate which entities involved in the Work must submit release of lien forms.
- J. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's Construction Schedule.
  - 4. Submittals Schedule
  - 5. List of Contractor's staff assignments.
  - 6. Copies of building permits.
  - 7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 8. Report of preconstruction conference.
  - 9. Certificates of insurance and insurance policies..
  - 10. Performance and payment bonds.
- K. City may withhold, in whole or in part, payment to such extent as may be necessary to protect itself from loss on account of:
  - 1. Defective Work not remedied.
  - 2. Claims filed or reasonable evidence indicating probable filing of claims by other parties

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- against Contractor or City because of Contractor's performance.
3. Failure of Contractor to make payments properly to Subcontractors or for material or labor.
  4. Damage to another contractor not remedied.
  5. Liquidated damages and costs incurred by City and/or Consultant for extended construction administration.
  6. Failure of Contractor to provide any and all documents required by the Contract Documents.
- L. No partial payment estimate will be processed for any contract which is beyond the contract completion date. After a contract runs past the completion date, only a final payment will be made when all work is complete.
- 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:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. Evidence that claims have been settled.
  5. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when City took possession of and assumed responsibility for corresponding elements of the Work.
  6. Final, liquidated damages settlement statement.
- N. The acceptance of final payment shall constitute a waiver of all claims by contractor, except those previously made in strict accordance with the provisions of the Contract and identified by Contractor as unsettled at the time of the application for final payment.
- O. If evidence is produced before the final settlement of all or any balance, that the party of the second part has failed to pay to laborers, employed on this work, or failed to pay for the materials used therein, or if the City has reason to suspect the same, the City may withhold such balance and, upon written evidence satisfactory to the City as to the amount due for such labor and materials, settle and pay for the same and charge the amounts to the party of the second part and deduct the same from said balance or balances.

**PART 2 - PRODUCTS (Not Used)****PART 3 - EXECUTION (Not Used)****END OF SECTION 012900**

**SECTION 01152 - APPLICATIONS FOR PAYMENT****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Submit Applications for Payment to the Engineer in accordance with the schedule established by Conditions of the Agreement between Owner and Contractor and the Contract Documents.

**PART 2 - RELATED SECTIONS**

- A. Section 01050 - Field Engineering
- B. Section 01310 - Construction Schedules
- C. Section 01370 - Schedule of Values
- D. Section 01700 - Contract Close Out
- E. Section 01720 - Project Record Documents

**2.02 FORMAT AND DATA REQUIRED**

- A. Submit applications typed on forms provided by the Owner (or forms provided by Contractor and agreed to by Owner), Application for Payment, with itemized data typed on 8 1/2 inch x 14 inch white paper and continuation sheets.
- B. Payment forms shall show significant detail to substantiate request. Additional detail may be required by the Engineer.

**2.03 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT**

- A. Application Form:
  - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
  - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
  - 3. Execute certification with signature of a responsible officer of Contract firm.

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## B. Continuation Sheets:

1. Fill in total list of scheduled component items of work, with item number and scheduled dollar value for each item.
2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored.
  - a. Round off values to nearest dollar, or as specified.
3. List each Change Order Number, and description, as for an original component item or work.

## 2.04 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

## A. When the Owner or the Engineer requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:

1. Project
2. Application number and date
3. Detailed list of enclosures
4. For stored products:
  - a. Item number and identification as shown on application.
  - b. Description of specific material.
  - c. Copy of material invoice.
  - d. Address of location where item is stored
  - e. Photographs of item (if requested)

## B. Submit one copy of data cover letter for each copy of application.

## C. As a prerequisite for payment, Contractor is to submit the following:

1. a "Surety Acknowledgment of Payment Request" letter showing amount of progress payment which the Contractor is requesting,
2. updated record drawings for review by the Engineer,
3. updated construction schedule for review by the Engineer,
4. construction photographs.

## 2.05 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in Application form as specified for progress payments.
- B. Provide FINAL COMPLETION documentation for the final statement of accounting as specified in Section 01700 - Contract Closeout.
- C. Submit final record drawings.

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## 2.06 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to the Engineer at the times stipulated in the Agreement.
- B. Number: Five copies of each Application.
- C. When the Engineer finds Application properly completed and correct, he will transmit certificate of payment to Owner, with copy to Contractor.

## PART 3 - PRODUCTS (NOT USED)

## PART 4 - EXECUTION (NOT USED)

**END OF SECTION**

**SECTION 01200 - PROJECT MEETINGS****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. The Engineer shall schedule and administer preconstruction meetings, periodic progress meetings, and specially called meetings throughout the progress of work. The Engineer shall:
  - 1. Prepare agenda for meetings.
  - 2. Make physical arrangements for meetings.
  - 3. Preside at meetings.
  - 4. Record in writing the minutes; include significant proceedings and decisions.
  - 5. Record the meeting with an audio recording device.
  - 6. Reproduce and distribute copies of minutes within five working days after each meeting:
    - a. To participants in the meeting.
    - b. To parties affected by decisions made at the meeting.
- B. Representatives of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall attend meetings to ascertain that work is executed consistent with Contract Documents and construction schedules.

**1.02 RELATED SECTIONS**

- A. Document 00100 - Instructions to Bidders.
- B. Section 01310 - Construction Schedules.
- C. Section 01340 - Shop Drawings, Working Drawings, and Samples.
- D. Other Sections as applicable.

**1.03 PRECONSTRUCTION MEETING**

- A. Schedule a preconstruction meeting no later than 15 days after date of Notice to Proceed.
- B. Location: A central site, convenient for all parties designated by the City.
- C. Attendance:
  - 1. City's Representative.
  - 2. Engineer and his Professional Consultants.



3. Resident Project Representative.
  4. Contractor's Superintendent.
  5. Major Subcontractors.
  6. Major Suppliers.
  7. Utilities.
  8. Others as appropriate.
- D. Suggested Agenda:
1. Distribution and discussion of:
    - a. List of major subcontractors and suppliers.
    - b. Projected Construction Schedule.
  2. Critical work sequencing/critical path scheduling.
  3. Major equipment deliveries and priorities.
  4. Project Coordination.
    - a. Designation of responsible personnel.
  5. Procedures and processing of:
    - a. Field decisions.
    - b. Proposal requests.
    - c. Submittals.
    - d. Change Orders.
    - e. Applications for Payments.
  6. Adequacy of Distribution of Contract Documents.
  7. Procedures for maintaining Record Documents.
  8. Use of Premises:
    - a. Office, Work and Storage Areas.
    - b. City's Requirements.
  9. Construction facilities, controls and construction aids.
  10. Temporary Utilities.

#### 1.04 PROGRESS MEETINGS

- A. Schedule regular periodic meetings. The progress meetings will be held as required by progress of the work.
- B. Hold called meetings as required by progress of the work.
- C. Location of the meetings: Project field office of the Contractor or Engineer.
- D. Attendance:

1. Engineer, and his professional consultants as needed.
  2. Subcontractors as appropriate to the agenda.
  3. Suppliers as appropriate to the agenda.
  4. Others as appropriate.
- E. Suggested Agenda:
1. Review, approval of minutes of previous meeting.
  2. Review of work progress since previous meeting.
  3. Field observations, problems and conflicts.
  4. Problems which impede Construction Schedule.
  5. Review of off site fabrication, delivery schedule.
  6. Corrective measures and procedures to regain projected schedule.
  7. Revisions to Construction Schedule.
  8. Progress, schedule, during succeeding work period.
  9. Coordination of schedules.
  10. Review submittal schedules; expedite as required.
  11. Maintenance of quality standards.
  12. Pending changes and substitutions.
  13. Review proposed changes for:
    - a. Effect on Construction Schedule and on a completion date.
    - b. Effect on other contracts of the Project.
  14. Other business.
  15. Construction schedule.
  16. Critical/long lead items.
- F. The Contractor is to attend progress meetings and is to study previous meeting minutes and current agenda items, in order to be prepared to discuss pertinent topics such as deliveries of materials and equipment, progress of work, etc.
- G. The Contractor is to provide a current submittal log at each progress meeting in accordance with Section 01340.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION**

## **SECTION 01260 - CONTRACT MODIFICATION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
  - 1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

#### **1.3 MINOR CHANGES IN THE WORK**

- A. Construction Project Manager will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on form included following the end of Part 3.

#### **1.4 REQUESTS FOR INFORMATION**

- A. If latent or unforeseen conditions arise that may require changes in the Work, the Contractor may submit a Request for Information to Construction Project Manager on the form included following the end of Part 3.

#### **1.5 PROPOSAL REQUESTS**

- A. City-Initiated Proposal Requests: Construction Project Manager will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal Requests issued by Construction Project Manager are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within ten (10) days, when not otherwise specified after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting

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an extension of the Contract Time.

- e. Quotation Form: Use forms acceptable to Construction Project Manager.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Construction Project Manager.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use forms acceptable to Construction Project Manager.

## **1.6 ADMINISTRATIVE CHANGE ORDERS**

- A. Allowance Adjustment: Refer to Division 01 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit Price Adjustment: Refer to Division 01 Section "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit price work.

## **1.7 CHANGE ORDER PROCEDURES**

- A. On City's approval of a Proposal Request, Construction Project Manager will issue a Change Order for signature of the Contractor on City's standard form. The Change Order will not be official until approved by the appropriate City Officials and signed by the City Engineer, City Manager and/or Mayor.

## **1.8 CONSTRUCTION CHANGE DIRECTIVE**

Construction Change Directive: Construction Project Manager may issue a Construction Change Directive on AIA Document G714], EJCDC Document C-940 or form acceptable to the Construction Project Manager. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

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- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

**PART 2 - PRODUCTS (Not Used)****PART 3 - EXECUTION (Not Used)****END OF SECTION 012600**

## SECTION 01310 - CONSTRUCTION SCHEDULES

## PART 1 - GENERAL

## 1.01 DESCRIPTION

- A. Promptly after Award of the Contract and within ten days after the effective date of the Agreement, prepare and submit to the Engineer an estimated construction progress schedules for the work, with sub-schedules of related activities which are essential to its progress.
- B. Submit revised progress schedules on a monthly basis.
- C. No partial payments shall be approved by the Engineer until there is an approved up to date construction progress schedule on hand.
- D. The Contractor shall designate an authorized representative of his firm who shall be responsible for development and maintenance of the schedule and of progress and payment reports. This representative of the Contractor shall have direct project control and complete authority to act on behalf of the Contractor's schedule.

## 1.02 RELATED SECTIONS

- A. Document 00700 – General Conditions of the Construction Contract
- B. Section 01010 - Summary of Work
- C. Section 01152 - Applications for Payment
- D. Section 01200 - Project Meetings
- E. Section 01340 - Shop Drawings, Working Drawings and Samples
- F. Other Sections as applicable.

## 1.03 FORM OF SCHEDULES

- A. Prepare schedules for submittal each month with pay request. The form of the schedule is to be Microsoft Project or approved equal. The Schedule is to indicate work completed to date and additions to or deletions from the schedule.
  - 1. Provide separate horizontal bar for each trade or operation within each structure or item.
  - 2. Horizontal time scale: In weeks from start of construction and identify the first work day of each month.
  - 3. Scale and spacing: To allow space for notations and future revisions.
- B. Format of listings: The chronological order of the start of each item of work for each structure.
- C. Identification of listings: By major specification section numbers as applicable

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and structure.

#### 1.04 CONTENT OF SCHEDULES

##### A. Construction Progress Schedule:

1. Show the complete sequence of construction by activity.
2. Show the dates for the beginning of, and completion of, each major element of construction in no more than a two week increment scale. Specifically list, but not limited to:
  - a. Receiving Materials
  - b. Construction Activity
  - c. Testing
  - d. Restoration
  - e. Startup
  - f. Record Drawings
  - g. Permit Close-out
  - h. Punch List
  - i. Owner Activities, Including Inspections
3. Show projected percentage of completion for each item, as of the first of each month.
4. Show projected dollar cash flow requirements for each month of construction.
5. Use of float suppression techniques such as preferential sequencing or logic, special lead/lag logic restraints, and extended activity times are prohibited, and use of float time disclosed or implied by use of alternate float-suppression techniques shall be shared to proportionate benefit of the Owner and Contractor.
6. Pursuant to above float-sharing requirement, no time extensions will be granted nor delay damages paid until a delay occurs which (i) impacts Project's critical path, (ii) consumes available float or contingency time, and (iii) extends work beyond contract completion date.
7. If the Contractor provides an accepted schedule with an early completion date, the Owner reserves the right to reduce the duration of the work to match the early completion date by issuing a deductive Change Order at no change in Contract Price.

##### B. Submittal Schedule for Shop Drawings and Samples in accordance with Section 01340. Must show:

1. The dates for Contractor's submittals.
2. The dates submittals will be required for owner furnished products, if applicable.

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- 3. The dates approved submittals will be required from the Engineer.
- C. A list of all long lead items (equipment, materials, etc).

#### 1.05 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
  - 1. Major changes in scope.
  - 2. Activities modified since previous submission.
  - 3. Revised projections of progress and completion.
  - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
  - 1. Problem areas, anticipated delays, and the impact on the schedule.
  - 2. Corrective action recommended, and its effect.
  - 3. The effect of changes on schedules of other prime contractors.

#### 1.06 SUBMISSIONS

- A. Submit initial schedules to the Engineer within 10 days after the effective date of the Agreement.
  - 1. The Engineer will review schedules and return review copy within 21 days after receipt.
  - 2. If required, resubmit within 7 days after return of review copy.
- B. Submit a minimum of five (5) copies of revised monthly progress schedules with that month's application for payment.

#### 1.07 DISTRIBUTION

- A. Distribute copies of reviewed schedules to:
  - 1. Owner (Two copies)
  - 2. Engineer (Two copies)
  - 3. Job Site File (One copy)
  - 4. Subcontractors (As needed)
  - 5. Other Concerned Parties (As needed)
- B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedule.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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**SECTION 01315  
PROJECT MANAGEMENT AND COORDINATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
1. Coordination Drawings.
  2. Special Project Procedures
  3. Administrative and supervisory personnel.
  4. Project meetings.
  5. Requests for Interpretation (RFIs).
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
- C. Related Sections include the following:
1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
  2. Division 01 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

**1.3 DEFINITIONS**

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

**1.4 COORDINATION**

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

**1.5 SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying

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products.

2. Number and title of related Specification Section(s) covered by subcontract.

- B. Key Personnel Names: Within 15 days of notice to proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

## 1.6 SPECIAL PROJECT PROCEDURES

- A. Discrepancies, Errors: Should discrepancies or errors appear in the drawings or specifications concerning materials, workmanship, or quantity of work to be performed, the Contractor will be required to immediately notify the City before proceeding with the work. If the Contractor fails to notify the City and proceeds with the work, Contractor will be required to correct the errors at his/her own expense. In the event of a conflict between the drawings and specifications, the City will decide on the way to perform the work or supply the materials. See also General Conditions, "Contractor to Check Plans and Data," Section 5-76.
- B. Dimensions and Measurements: The figured dimensions on the drawings or notes including dimensions shall be used for construction instead of measurements of the drawings by scale. No scale measurements shall be used as a dimension for construction. Dimensions on all drawings as well as the detail drawings themselves are subject in every case to measurements of adjacent or previously completed work. All such measurements necessary shall be taken before undertaking any work dependent upon such data. Field verification of dimensions on plans is mandatory since actual locations, distances, and levels will be governed by actual field conditions.
- C. Discrepancies or Inconsistencies: Should any discrepancy or inconsistency appear between larger and smaller scale drawings in any of the divisions of the specifications or in any of the contract documents, such discrepancy shall be immediately submitted to the City for correction before proceeding with the work in question. In no case shall the Contractor make any alterations, erasures, changes or modifications in the drawings or specifications.
1. Should it appear that any of the work as specified or shown by the drawings is not sufficiently detailed or explained, the Contractor shall apply to the City for such further details or information as may be necessary for full understanding of the work in question.
  2. The data set forth in these specifications and indicated on the drawings are as accurate as can be obtained, but their extreme accuracy is not guaranteed. Final application thereto shall be determined on the job as conditions may demand and subject to the approval of the City.
- D. Plans and Specifications Acknowledgment by Subcontractors and Suppliers: All Subcontractors and suppliers must submit, through the General Contractor to the City Engineer, a statement on their individual letterhead stationery, 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:
1. Has received or reviewed a FULL set of approved plans and specifications for the project,

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2. 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
  3. 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 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 ADMINISTRATIVE AND SUPERVISORY PERSONNEL**

- A. The Contractor shall employ a competent superintendent who can communicate with spoken English, and who shall be in attendance at the site full-time when any work is in progress. The superintendent shall be satisfactory to the City's Engineer and shall not be changed except with the consent of the City's Engineer.
- B. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

**1.8 PROJECT MEETINGS**

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify City Representative of scheduled meeting dates and times.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including City Representative and Engineer, within 48 hours of the completion of the meeting.
    - a. Minutes from all meetings shall be prepared by the Contractor, reflecting all items discussed as well as agreed upon or suggested solutions. These minutes shall be a true reflection of what actually happened at the meeting.
    - b. Items discussed and not resolved or being handled by any one of the parties present shall be reflected along with the name of the person responsible in all ongoing minutes until it is resolved.
    - c. Minutes shall be typewritten within 24 hours from the completion of the meeting. They shall immediately be FAXED to all parties present and followed by a copy through the mail.
    - d. All items requiring information and not resolved shall be reflected in each and every set of minutes thereafter until it is totally resolved
- B. Preconstruction Meeting: After the contract(s) has been awarded, executed, and a tentative work schedule has been composed, and prior to the start of the work, the Contractor(s), the

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Engineer, the City's Representative, and other persons and/or governmental agencies that are involved shall meet. The minimum agenda is to include but is not limited to the following:

1. Distribute and discuss list of major Subcontractors
2. Tentative construction schedule
3. Critical work sequencing and long-lead items
4. Designation of key personnel and their duties
5. Procedures for processing field decisions and Change Orders
6. Procedures for RFIs
7. Procedures for testing and inspecting
8. Adequacy of distribution of contract documents
9. Submittal of Shop drawings, project data, and samples
10. Procedures for maintaining Record documents
11. Use of premises
12. Protection of existing construction including landscape materials
13. Work restrictions
14. Construction waste management and recycling
15. Parking availability
16. Working hours
17. Safety and first-aid procedures
18. Security procedures
19. Housekeeping procedures including progress cleaning.
20. Schedule of values.
21. Processing of payments or contract.

C. Progress Meetings: Conduct progress meetings at biweekly intervals. Coordinate dates of meetings with preparation of payment requests.

1. Attendees: In addition to representatives of City and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
  - a. Review and approve minutes of previous Progress Meeting.
  - b. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - 1) Review schedule for next period.
  - c. Review present and future needs of each entity present, including the following:
    - 1) Sequence of operations.
    - 2) Status of submittals.
    - 3) Deliveries.
    - 4) Off-site fabrication.
    - 5) Access.

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- 6) Work hours.
  - 7) Hazards and risks.
  - 8) Progress cleaning.
  - 9) Quality and work standards.
  - 10) Status of correction of deficient items.
  - 11) Field observations.
  - 12) RFIs.
  - 13) Status of proposal requests.
  - 14) Pending changes.
  - 15) Status of Change Orders.
  - 16) Pending claims and disputes.
  - 17) Documentation of information for payment requests.
3. Minutes: General Contractor shall record the meeting minutes. These minutes shall indicate all items discussed as well as agreed upon or suggested solutions. They shall be a true reflection of what occurred at the meeting.
  4. Reporting: Within 24 hours, distribute minutes of the meeting by fax transmittal to each party present and to parties who should have been present.
    - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

**1.9 REQUESTS FOR INTERPRETATION (RFIs)**

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
  1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
  1. City Project Number
  2. City Project Name.
  3. Date.
  4. Name of Contractor.
  5. RFI number, numbered sequentially.
  6. Specification Section number and title and related paragraphs, as appropriate.
  7. Drawing number and detail references, as appropriate.
  8. Field dimensions and conditions, as appropriate.
  9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  10. Contractor's signature.
  11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
    - a. Supplementary drawings prepared by Contractor shall include dimensions,

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thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

- C. Hard-Copy RFIs: Form as provided and instructed by the Construction Management Department.
  - 1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above. Word Template is available upon request from the City Engineer's Office.
  - 1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. 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.
  - 1. The following RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for coordination information already indicated in the Contract Documents.
    - d. Requests for adjustments in the Contract Time or the Contract Sum.
    - e. Requests for interpretation of Engineer's actions on submittals.
    - f. Incomplete RFIs or RFIs with numerous errors.
  - 2. Engineer's action may include a request for additional information, in which case Engineer's time for response will start again.
  - 3. 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."
    - a. 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.
- F. 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.
- G. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Include the following:
  - 1. Project name.
  - 2. Name and address of Contractor.
  - 3. RFI number including RFIs that were dropped and not submitted.
  - 4. RFI description.
  - 5. Date the RFI was submitted.
  - 6. Date Engineer's response was received.
  - 7. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
  - 8. Identification of related Field Order, Work Change Directive, and Proposal Request, as

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appropriate.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 013100**

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**SECTION 01320  
CONSTRUCTION PROGRESS DOCUMENTATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Contractor's Construction Schedule.
  2. Submittals Schedule.
  3. Daily construction reports.
  4. Material location reports.
  5. Site condition reports.
  6. Special reports.
- B. Related Sections include the following:
1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
  2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
  3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
  4. Division 01 Section "Photographic Documentation" for submitting construction photographs.
  5. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

**1.3 SUBMITTALS**

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal
  2. Name of subcontractor.
  3. Description of the Work covered.
  4. Scheduled date for Engineer's final release or approval.
- B. Contractor's Construction Schedule: Submit three copies of initial schedule, large enough to show entire schedule for entire construction period.
- C. Daily construction Reports: Submit two copies at weekly intervals.
- D. Field Condition Reports: Submit two copies at time of discovery of differing conditions.
- E. Special Reports: Submit two copies at time of unusual event.



**PART 2 - PRODUCTS****2.1 SUBMITTALS SCHEDULE**

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
  - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
  - 2. Initial Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

**2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL**

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each 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.
  - 2. All activities with a time duration exceeding five (5) days shall be shown as separate items.
  - 3. Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
  - 4. Where materials require more than one (1) week fabrication or order time, this order/fabrication time shall be shown.
- C. 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.
- D. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis to demonstrate the effect of the proposed change on the overall project schedule.

**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 30 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:
1. List of subcontractors at Project site.
  2. Approximate count of personnel at Project site.
  3. Equipment at Project site.
  4. Material deliveries.
  5. High and low temperatures and general weather conditions.
  6. Accidents.
  7. Meetings and significant decisions.
  8. Unusual events (refer to special reports).
  9. Stoppages, delays, shortages, and losses.
  10. Emergency procedures.
  11. Orders and requests of authorities having jurisdiction.
  12. Change Orders received and implemented.
  13. Construction Change Directives received and implemented.
  14. Services connected and disconnected.
  15. Equipment or system tests and startups.
  16. Substantial Completions authorized.
- B. Site Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

## 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 or predictable.

## 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.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  3. As the Work progresses, indicate Actual Completion percentage for each activity.

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- B. Distribution: Distribute copies of approved schedule to City Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
  2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

**END OF SECTION 013200**

## SECTION 01330 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
  - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
  - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
  - 4. Division 01 Section "Photographic Documentation" for submitting **construction photographs and construction video recordings**.
  - 5. Division 01 Section "Quality Requirements" for submitting test and inspection reports **and for mockup requirements**.
  - 6. Division 01 Section "Closeout Procedures" for submitting warranties.
  - 7. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 8. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 9. Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of City's personnel.
  - 10. Divisions 02 through 33 Sections for specific requirements for submittals in those Sections.

#### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

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- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

**1.4 ACTION SUBMITTALS**

- E. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
  4. Format: Arrange the following information in a tabular format:
    - a. Scheduled date for first submittal.
    - b. Specification Section number and title.
    - c. Submittal category: Action; informational.
    - d. Name of subcontractor.
    - e. Description of the Work covered.
    - f. Scheduled date for Architect's final release or approval.
    - g. Scheduled date of fabrication.
    - h. Scheduled dates for purchasing.
    - i. Scheduled dates for installation.
    - j. Activity or event number.

**1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS**

- F. Design Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by the City for Contractor's use in preparing submittals.
1. City will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings **and Project record drawings**.
    - a. City makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
    - b. Digital Drawing Software Program: The Contract Drawings are available in AutoCAD Civil 3D (current version) dwg format.
- G. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

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1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. 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.
    - a. City reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- H. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on the City Project Manager's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow **Ten (10)** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. The City's Project Manager will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow **Ten (10)** days for review of each resubmittal.
- I. Paper and/or Electronic Submittals: Place a permanent label or title block on each submittal item for identification and include a cover letter of transmittal.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately **3 by 6 inches (75 by 150 mm)** on label or beside title block to record Contractor's review and approval markings and action taken by the City.
  3. Items being submitted requiring an engineer's, architect's, or surveyor's signature and seal shall be submitted in hardcopy format.
  4. Include the following information for processing and recording action taken:
    - a. Project name and City Project Number.
    - b. Date of submittal.
    - c. Name of Contractor.
    - d. Name of firm or entity that prepared submittal.
    - e. Name of supplier/manufacturer
    - f. Specification Section number related to the submittal
    - g. Submittal number or other unique identifier, including revision identifier.
      - 1) Submittal number shall use a sequential numbering system (e.g. 001, 002, 003, etc...). Resubmittals shall indicate the original submittal number with a revision number (e.g. 001-rev01).
    - h. Drawing number and detail references, as appropriate.
    - i. Location(s) where product is to be installed, as appropriate.
    - j. Other necessary identification.

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5. Additional Hardcopies: Unless additional copies are required for final submittal, and unless City observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
  6. If a submittal is electronic (i.e. via email) then the subject line of the email shall include reference to the City Project Number and the submittal title and submittal number – at a minimum.
  7. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by City on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
  8. 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 with approval notation from Architect's action stamp.
  9. 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.
  10. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from City's action stamp.
- F. Options: Identify options requiring selection by Architect/Construction Project Manager.
- C. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by City on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- D. 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.
- Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from City's action stamp.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Action Submittals: Submit **five (5)** paper copies of each submittal unless otherwise indicated. City will return **three (3)** copies.
  2. Informational Submittals: Submit **five (5)** paper copies of each submittal. City will

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- return **three (3)** copies.
3. Certificates and Certifications Submittals: Provide a 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.
    - a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
  - B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
    1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
    2. Mark each copy of each submittal to show which products and options are applicable.
    3. Include the following information, as applicable:
      - a. Manufacturer's catalog cuts.
      - b. Manufacturer's product specifications.
      - c. Standard color charts.
      - d. Statement of compliance with specified referenced standards.
      - e. Testing by recognized testing agency.
      - f. Application of testing agency labels and seals.
      - g. Notation of coordination requirements.
      - h. Availability and delivery time information.
    4. For equipment, include the following in addition to the above, as applicable:
      - a. Wiring diagrams showing factory-installed wiring.
      - b. Printed performance curves.
      - c. Operational range diagrams.
      - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
    5. Submit Product Data before or concurrent with Samples.
    6. Submit Product Data in the following format:
      - a. PDF electronic file.
  - C. Submit **five (5)** paper copies of each submittal unless otherwise indicated. City will return **three (3)** copies.
  - D. 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, unless submittal based on City's digital data drawing files is otherwise permitted.
    1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
      - a. Identification of products.
      - b. Schedules.
      - c. Compliance with specified standards.
      - d. Notation of coordination requirements.



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- e. Notation of dimensions established by field measurement.
  - f. Relationship and attachment to adjoining construction clearly indicated.
  - g. Seal and signature of professional engineer if specified.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least **[8-1/2 by 11 inches (215 by 280 mm), but no larger than 24 by 36 inches (610 by 915 mm)]**.
  3. Submit Shop Drawings in the following format:
    - a. PDF electronic file.
    - b. **Five (5)** opaque copies of each submittal. Architect will retain **two (2)** copies; remainder will be returned.
- E. 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.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of applicable Specification Section.
    - e. Specification paragraph number and generic name of each item.
  3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
  4. 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.
    - a. 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.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  5. 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.
    - a. Number of Samples: Submit **two (2)** full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return one submittal with options selected.
  6. 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

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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.

- a. Number of Samples: Submit **five (5)** sets of Samples. City will retain **two (2)** Sample sets; remainder will be returned. **Mark up and retain one returned Sample set as a project record sample.**

- 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
- 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least **three (3)** sets of paired units that show approximate limits of variations.

- F. Product Schedule: 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:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.
5. Submit product schedule in the following format:

- a. PDF electronic file.
- b. Submit **five (5)** paper copies of each submittal unless otherwise indicated, or if submitted via Oracle Unifier. City will return **three (3)** copies.

- G. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- H. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- I. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- L. Installer Certificates: Submit 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.
- M. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

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- N. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- O. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- P. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- Q. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - 1. Name of evaluation organization.
  - 2. Date of evaluation.
  - 3. Time period when report is in effect.
  - 4. Product and manufacturers' names.
  - 5. Description of product.
  - 6. Test procedures and results.
  - 7. Limitations of use.
- R. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

## 2.2 DELEGATED-DESIGN SERVICES

- S. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- T. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit **three (3)** paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with

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other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to City.

- B. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

### **3.2 REVIEWER'S ACTION**

- D. General: The City will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- E. Action Submittals: City will review each submittal, make marks to indicate corrections or modifications required, and return it. City will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
  - 1. Approved as submitted
  - 2. Approved as noted
  - 3. Revise and resubmit
  - 4. Rejected.
- F. Informational Submittals: City will review each submittal and will not return it, or will return it if it does not comply with requirements. City will forward each submittal to appropriate party.
- G. Partial or incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- H. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

**END OF SECTION**

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**SECTION 01340****SHOP DRAWINGS, WORKING DRAWINGS AND SAMPLES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. The contractor shall submit to the Engineer for review, such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. The Contractor shall submit five (5) copies of shop drawings or other data to the Engineer.
- C. Within thirty (30) calendar days after the effective date of the Agreement, the Contractor shall submit to the Engineer a complete list of preliminary data for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specific items. Review of this list by the Engineer shall in no way expressed or implied relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.
- D. The contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and Engineer. This log should include the following items:
  - 1. Submittal-Description and Number assigned.
  - 2. Date to Engineer.
  - 3. Date returned to Contractor (from Engineer).
  - 4. Status of Submittal (Approved/Resubmit/Rejected).
  - 5. Date of Resubmittal and Return (as applicable).
  - 6. Date material released (for fabrication).
  - 7. Projected date of fabrication.
  - 8. Projected date of delivery to site.
  - 9. Status of O & M submittal.

**1.02 RELATED SECTIONS**

- A. Section 01310 - Construction Schedules

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- B. Section 01720 - Project Record Documents
- C. Section 01730 - Operating and Maintenance Data
- D. Other Sections as applicable.

#### 1.03 CONTRACTOR'S RESPONSIBILITY

- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents.
- B. Determine and verify:
  - 1. Field measurements
  - 2. Field construction criteria
  - 3. Catalog numbers and similar data
  - 4. Conformance and Specifications
- C. The Contractor shall furnish the Engineer a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
- D. Designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Shop Drawings, Working Drawings and Samples will be needed.
- E. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, approved by the Engineer.
- F. The Contractor shall submit to the Engineer all shop drawings, working drawings and samples sufficiently in advance of construction requirements and shall account for Engineers Shop Drawing review time accordingly.
- G. The Contractor shall submit two (2) copies of descriptive or product data submittals to complement shop drawings for the Engineer plus the number of copies which the Contractor requires. The Engineer will retain two (2) sets. All blueprint shop drawings shall be submitted with one (1) set of reproducible and four (4) sets of print. The Engineer will review the drawings and return to the Contractor the set of marked-up drawings with appropriate review comments.
- H. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the review and Approval by Engineer of the necessary Shop Drawings.

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#### 1.04 ENGINEER'S REVIEW OF SHOP DRAWINGS

- A. The Engineer's review of drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation. The Engineer's review and exception if any, will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown.
- B. The review of drawings and schedules will be general, and shall not be construed:
  - 1. as permitting any departure from the Contract requirements;
  - 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
  - 3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.
- C. If the drawings or schedule as submitted describe variations and/or show a departure from the Contract requirements which Engineers finds to be in the interest of the Owner and to be minor as not to involve a change in the Contract Price or time for performance, the Engineer may return the reviewed drawings without noting an exception.
- D. When reviewed by the Engineer, each of the Shop Drawings will be identified as having received such review being so stamped and dated. Shop Drawings stamped "REJECTED" and with required corrections shown will be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as the first submittals. On resubmittals, the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.
- F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- G. The Engineer will review one submittal and one re-submittal after which cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's charges to the Owner under the terms of the Engineer's agreement with the Owner.
- H. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.
- I. No partial submittals will be reviewed. Submittals not complete will be returned to

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the Contractor, and will not be considered "Rejected" until resubmitted.

- J. The Engineer shall return Shop Drawing submittals to the Contractor within twenty-one (21) days calendar days from the date the Engineer receives them.

#### 1.05 SHOP DRAWINGS

- A. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above.
- B. Drawings and schedules shall be checked and coordinated with work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.
- C. Each Shop Drawing, shall have a blank area 3 1/2 inches by 3 1/2 inches, located adjacent to the title block. The title block shall display the following:
1. Number and title of the drawing.
  2. Date of drawing or revision.
  3. Name of project building or facility.
  4. Name of contractor and subcontractor submitting drawing.
  5. Clear identification of contents and location of work.
  6. Specification title and number.
- D. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings have been reviewed.
- E. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- F. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, address and telephone number of the manufacturer's representative and service company so that service and spare parts can be readily obtained. In addition, a maintenance and lubrication

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schedule for each piece of equipment shall be submitted along with each shop drawing submittal.

- G. All manufacturers or equipment supplier who proposes to furnish equipment or products under Divisions 11, 12, 13, 14, 15 and 16 shall submit an installation list to the Engineer along with the required shop drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least five (5) years.
- H. Only the Engineer will utilize the color "red" in marking Shop Drawing submittals.
- I. Before final payment is made, the Contractor shall furnish to Engineer two (2) sets of record shop drawings all clearly revised, complete and up to date showing the permanent construction as actually made for all reinforcing and structural steel, miscellaneous metals, process and mechanical equipment, piping, electrical system and instrumentation system.

#### 1.06 WORKING DRAWINGS

- A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's plans for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false-work; for underpinning; and for such other work as may be required for construction, but does not become an integral part of the project.
- B. Copies of working drawings as noted in subparagraph 1.06A above, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for work.
- C. Working drawings shall be signed by a Registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the Engineer, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. The Contractor assumes all risks of error; the Owner and Engineer shall have no responsibility therefore.

#### 1.07 SAMPLES

- A. The Contractor shall furnish, for the approval of the Engineer, samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:

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1. Functional characteristics of the product, with integrally related parts and attachment devices.
  2. Full range of color, texture and pattern.
  3. A minimum of two samples of each item shall be submitted.
- C. Each sample shall have a label indicating
1. Name of Project
  2. Name of Contractor and Subcontractor
  3. Material or Equipment Represented
  4. Place of Origin
  5. Name of Producer and Brand (if any)
  6. Location in Project
- (Samples of finished materials shall have additional marking that will identify them under the finished schedules.)
- D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in subparagraph 1.07B above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any Contract requirements.
- E. Approved samples not destroyed in testing shall be sent to the Engineer or stored at the site of the work. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION**

**DOCUMENT 01370 - SCHEDULE OF VALUES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Submit to the Engineer a Schedule of Values allocated to the various portions of the Work, within 10 days after the effective date of the Agreement.
- B. Upon request of the Engineer, support the values with data which will substantiate their correctness.
- C. The Schedule of Values shall be used as the basis for the Contractor's Applications for Payment.

**1.02 RELATED SECTIONS**

- A. Section 01152 - Applications for Payment
- B. Other Sections as applicable.

**1.03 FORM AND CONTENT OF SCHEDULE OF VALUES**

- A. Present schedule on an 8-1/2 inch x 11 inch white paper; Contractor's standard forms and automated printout will be considered for approval by the Engineer upon Contractor's request. Identify schedule with:
  - 1. Title of Project and location
  - 2. Engineer and Project number
  - 3. Name and Address of Contractor
  - 4. Contract designation
  - 5. Date of submission
- B. Schedule shall list the installed value of the component parts to include individual equipment, piping, electrical, construction items, paving, of the Work (as required) in sufficient detail to serve as a basis for computing values for progress payments during construction and for additions and deletions to the Work.
- C. For the various portions of the Work:
  - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
- D. The sum of all values listed in the schedule shall equal the total Contract Sum.
- E. Schedules are subject to Engineer's approval wherein additional line item detail may be required.

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PART 2 - PRODUCTS (NOT USED)

PART 3 - PRODUCTS (NOT USED)

**END OF SECTION**

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**SECTION 01380 - PHOTOGRAPHIC DOCUMENTATION****PART 1 - GENERAL****1.1 SUMMARY**

- A. Employ competent photographer to take construction record photographs for preconstruction conditions, periodically during course of Work, and post-construction.
- B. Related Sections include the following:
  - 1. Division 01 Section "Submittal Procedures" for submitting photographic documentation.
  - 2. Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.
  - 3. Other Sections as applicable.

**1.2 INFORMATIONAL SUBMITTALS**

- A. Provide photographs taken on cutoff date for each scheduled Application for Payment.
- B. View and Quantities Required:
  - 1. Take a minimum of 24 exposures of the site and adjacent property at preconstruction, monthly, and post-construction.
  - 2. Aerial photography shall be acceptable in addition to ground level exposures for items out of sight of aerial photography.
- C. Negatives:
  - 1. Remain property of photographer
  - 2. Require that photographer maintain negatives for a period of two years from Date of Completion of entire project.
  - 3. Photographer shall agree to furnish additional prints to Owner and the Engineer at commercial rates applicable at time of purchase.
- D. Construction Photographs: Submit digital media files of each photographic view within seven days of taking photographs.
  - 1. Format: Minimum 3200 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph. File names shall be in the following format: City project number – date taken (YYMMDD) – picture number (example: 10350-090408-011 would indicate project number 10350 taken on April 8, 2009 photograph number 11). Submit on CD with folders for separate dates.
  - 2. Identification: On jewel case and CD, provide an applied label with the following information:
    - a. Name of Project.
    - b. Name of Contractor.
    - c. Dates photographs were taken.

### **1.3 USAGE RIGHTS**

- A. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

## **PART 2 - PRODUCTS**

### **2.1 PHOTOGRAPHIC MEDIA**

- A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 mega pixels, and at an image resolution of not less than 3200 by 2400 pixels.

## **PART 3 - EXECUTION**

### **3.1 CONSTRUCTION PHOTOGRAPHS**

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- B. Photograph from locations to adequately illustrate condition of construction and state of progress.
  - 1. At successive periods of photography, take at least one photograph from the same overall view as previously.
  - 2. Consult with the Engineer at each period of photography for instructions concerning views required.
- C. Preconstruction Photographs: Before starting construction, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, or, as directed by Engineer.
- D. Periodic Construction Photographs: Take minimum 20 photographs weekly, with timing each month adjusted to coincide with the cutoff date associated with each Application for Payment. Select vantage points, including aerial photographs to show status of construction and progress since last photographs were taken.
- E. Final Completion Construction Photographs: Take 20 color photographs after date of Substantial Completion for submission as Project Record Documents. Construction Manager will direct photographer for desired vantage points.
  - 1. Do not include date stamp.

**END OF SECTION 013233**

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**SECTION 01410 - MATERIALS AND INSTALLATION TESTING****PART 1 - GENERAL****1.01 DISCRIPTION**

- A. Contractor shall employ and pay for the services of an independent testing laboratory to perform materials and installation testing of the type and frequency specified in the Contract Documents including, but not limited to, Geotechnical Testing Services and concrete testing.
- B. Geotechnical Testing Services shall include, but not be limited to, periodic site inspections, soil proctor tests, soil classification tests and soil densities or compaction tests.
- C. The engineer may, at any time, elect to have materials and equipment tested for conformity with the Contract Documents.
- D. Contractor shall include cost of testing in the Contract Price.
- E. Piping pressure test and bacteriological testing shall be in accordance with the applicable Section.

**1.02 RELATED SECTIONS**

- A. Section 01050 – Field Engineering
- B. Section 02200 – Earthwork
- C. Other Sections as applicable.

**1.03 REFERENCES**

- A. FDOT Design Standards.
- B. FDOT Standard Specifications for Road and Bridge Construction.
- C. Broward County Traffic Engineering Division (BCTED) Minimum Standards and the BCTED Pavement Markings & Signs Detail Sheet.

**1.04 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY**

- A. Laboratory is not authorized to:
  - 1. Release, revoke, alter or enlarge on requirements of Contract Documents
  - 2. Approve or accept any portion of the Work
  - 3. Perform any duties of the Contractor

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## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

## 3.01 CONTRACTOR'S RESPONSIBILITIES

- A. Provide all testing required by the Contract Documents as well as laws, ordinances, rules, regulations, orders, or approvals of public authorities.
- B. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.
- C. Cooperate with laboratory personnel, and provide access to Work and to Manufacturer's operations.
- D. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- E. Provide to the laboratory the preliminary design mix proposed to be used for concrete and other materials mixes which require control by the testing laboratory.
- F. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Engineer may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contractor Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.
- G. Furnish incidental labor and facilities:
  - 1. To provide access to Work to be tested
  - 2. To obtain and handle samples at the Project site or at the source of the product to be tested
  - 3. To facilitate inspections and tests
  - 4. For storage and curing of test samples
- H. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
  - 1. When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to Contractor's negligence.
- I. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling, and testing required for the Contractor's convenience.

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- J. If the Owner requests tests in addition to those specified in the contract, and if the test results indicate the material or equipment complies with the Contract Documents, the Owner shall pay for the cost of the testing laboratory. If the tests and any subsequent retests indicate the materials and equipment fail to meet the requirements of the Contract Documents, the Contractor may pay for the laboratory costs directly to the testing firm or the total of such costs shall be deducted from any payments due the Contractor.
- K. The Contractor shall pay costs for additional trips to the project by the agency when scheduled times for tests and inspections are canceled and agency is not notified sufficiently in advance of cancellation to avoid the trip.

**3.02 TESTING**

- A. The Contractor shall obtain the services of a professional testing laboratory approved by the Engineer to perform the following type of tests and test frequencies. Copies of all reports are to be sent to the Engineer as soon as possible.
- B. Density tests for trench backfill at a minimum rate of three (3) tests per lift in 1,000 feet of trench, but not less than two (2) tests per lift if less than 500 feet of trench, at Engineer's discretion based on field observation.
- C. Density tests for subgrade compaction at a minimum rate of three (3) tests in 1,000 feet of roadway, but not less than two (2) tests, at Engineer's discretion based on field observation.
- D. Density tests for limerock base at a minimum rate of three (3) tests per day on each course of completed compacted base, but not less than two (2), at Engineer's discretion based on field observation.
- E. Density tests for roadway crossings at the rate of one test per lane per lift of compacted material, beginning one foot above the normal water table.
- F. If in the opinion of the Engineer, suitable compaction has not been achieved around structures, density tests may be required.
- G. Concrete compressive strength at the rate of three (3) cylinders per the lesser of 50 cubic yards or per day.
- H. Should the above test results indicate deficiencies, the Engineer may order additional tests at the Contractor's expense, and all reworked areas shall be retested at the Contractor's expense.
- I. Testing in the County right-of-way shall meet the requirements of the Florida Department of Transportation.

**END OF SECTION**

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**SECTION 01505 - CONTROL OF WORK****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. The Contractor shall furnish personnel and equipment which will be efficient, appropriate and a quantity large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the Proposal. If at any time such personnel appear to the Engineer to be inefficient, inappropriate or insufficient for securing the quality of work required or for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character or increase the personnel and equipment, and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

**1.01 RELATED SECTIONS**

- A. Section 01010 – Summary of Work
- B. Section 01015 – General Requirements
- C. Section 01030 – Special Project Procedures
- D. Other Sections as applicable.

**1.02 PIPE LOCATIONS**

- A. Proposed facilities shall be located substantially as indicated on the Drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

**1.03 OBSTRUCTIONS**

- A. The attention of the Contractor is drawn to the fact that during digging at the Project site, the possibility exists of the Contractor encountering various water, sewer, gas, telephone, electrical, or other lines not shown on the Drawings. The Contractor shall exercise extreme care before and during digging to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, The Contractor shall repair the line at no cost to the Owner.
- B. 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.

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- C. 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 a 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.
- D. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility. Test pits shall be dug at the Contractor's expense, as directed.
- E. 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.
- F. In 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.
- G. 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.
- H. 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 at the Contractor's expense. Sewer laterals are included.
- I. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other work.
- J. All power, telephone or the communication cable ducts, gas and water mains,

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irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and any other 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, irrigation line, 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.

**1.04 OPEN EXCAVATIONS**

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. The length of open trench will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Engineer. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of open trench or prohibiting stacking excavated material in the street, and requiring that the trenches shall not remain open overnight.
- B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be well lighted at night.

**1.05 SITE CLEANLINESS**

- A. Dust Abatement - The Contractor shall furnish all labor, equipment, and means required and shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity. The Contractor shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the Engineer.
- B. Rubbish Control - During the progress of the work, the Contractor shall keep the site of the work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the work site, and shall establish regular intervals of collection and disposal of such materials and waste. The Contractor shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

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## C. Sanitation

1. Toilet Facilities - Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.
2. Sanitary and Other Organic Wastes - The Contractor shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor or organic material wastes from any other source related to the Contractor's operations shall be disposed of away from the site in a manner satisfactory to the Engineer and in accordance with all laws and regulations pertaining thereto.

## 1.06 RELOCATIONS

- A. The Contractor shall be responsible for the relocation of structures, including but not limited to light poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid for the project and shall not result in any additional cost to the Town.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

## 3.01 COOPERATION WITHIN THIS CONTRACT

- A. All firms or persons authorized to perform any work under this Contract shall cooperate with the General Contractor and his subcontractors or trades, and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

## 3.02 PROTECTION OF CONSTRUCTION AND EQUIPMENT

- A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed and all portions injured shall be reconstructed by the Contractor at his own expense.
- B. Further, the Contractor shall take all necessary precaution to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the Owner.

**END OF SECTION**

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**SECTION 01510 - TEMPORARY UTILITIES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Furnish, install and maintain temporary utilities required for construction, remove on completion of work.
- B. Pay all fees associated with temporary utilities including water consumption charges.

**1.02 RELATED SECTIONS**

- A. Section 01010: Summary of Work
- B. Other Sections as applicable.

**1.03 REQUIREMENTS OF REGULATORY AGENCIES**

- A. Comply with National Electric Code.
- B. Comply with Federal, State and Local codes and regulations and with utility company requirements.
- C. Comply with County Health Department and Environmental Regulations.

**PART 2 - PART 2 - PRODUCTS****2.01 MATERIALS**

- A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

**2.02 TEMPORARY ELECTRICITY AND LIGHTING**

- A. Arrange with utility company, provide service required for power and lighting, and pay all costs for service and for power used in the construction, testing and trial operation prior to final acceptance of the work by the Owner.
- B. Install circuit and branch wiring, with the area distribution boxes located so that power and lighting is available throughout the construction by the use of construction type power cords.
- C. Provide adequate artificial lighting for all areas of work when natural light is not

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adequate to work, and all areas accessible to the public.

#### 2.03 TEMPORARY WATER

- A. Arrange with the CITY to provide water for construction purposes.
- B. Install branch piping with taps located so that water is available throughout the construction by the use of hoses.
- C. Install at each and every connection to the Owner water supply a backflow preventer meeting the requirements of ANSI A40.6 and AWWA C511. Contractor shall be required to meter and pay for all water used.

#### 2.04 TEMPORARY SANITARY FACILITIES

- A. Provide sanitary facilities in compliance with laws and regulations.
- B. Service, clean and maintain facilities and enclosures.

### PART 3 - EXECUTION

#### 3.01 GENERAL

- A. Maintain and operate systems to assure continuous service.
- B. Modify and extend systems as work progress requires.

#### 3.02 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.
- C. Restore permanent facilities used for temporary services to specified condition.

**END OF SECTION**

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**SECTION 01530 - EXISTING UTILITIES****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. This Section provides for specifications related to construction in the vicinity of existing utilities.

**1.01 RELATED SECTIONS**

- A. Section 01010 – Summary of Work
- B. Section 01015 – General Requirements
- C. Section 01030 – Special Project Procedures
- D. Other Sections as applicable.

**1.02 CONTRACTOR RESPONSIBILITIES**

- A. The term existing utilities shall be deemed to refer to both publicly-owned and privately-owned utilities including, but not limited to, electric power and lighting, telephone, water, gas, storm drains, process lines, sanitary sewers and all appurtenant structures.
- B. Prior to underground construction, the Contractor is required by the Underground Facility Damage Prevention and Safety Act, Chapter 556 FS to contact Sunshine 811, for the location of underground utilities.
- C. Where existing utilities and structures are indicated in the Contract Documents, it shall be understood that all of the existing utilities and structures affecting the work may not be shown and that the locations of those shown are approximate only. It shall be the responsibility of the Contractor to ascertain the actual extent and exact location of existing utilities and structures. In every instance, the Contractor shall notify the proper authority having jurisdiction and obtain all necessary directions and approvals before performing any work in the vicinity of existing utilities.
- D. The Contractor shall be responsible for uncovering and exposing existing utilities sufficiently in advance of pipe laying operations to confirm elevation, size, material and clearance separation(s). If, upon excavation, an existing utility is found to be in conflict with the proposed construction or be of a size or material different from what is shown on the plans, the Contractor shall immediately notify the Engineer, who will in turn prepare a recommendation. Failure of the Contractor to perform advance investigations shall not relieve it of any claims for delay or damages.
- E. The work shall be carried out in a manner to prevent disruption of existing services and to avoid damage to the existing utilities. Temporary connections shall be provided, as required, to insure uninterrupted of existing services. Any damage resulting from the work of this Contract shall be promptly repaired by the Contractor at his own expense in a manner approved by the Engineer and further subject to the requirements of any authority having jurisdiction. Where it is required by the

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authority having jurisdiction that they perform their own repairs or have them done by others, the Contractor shall be responsible for all costs thereof.

- F. Where excavations by the Contractor require any utility lines or appurtenant structures to be temporarily supported and otherwise protected during the construction work, such support and protection shall be provided by the Contractor. All such work shall be performed in a manner satisfactory to the and the respective authority having jurisdiction over such work.

### 1.03 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 three days nor more than seven days prior to excavation so that a representative may be present during such excavation.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

### 3.01 RESTORATION OF PAVEMENT

- A. General: All paved areas including concrete, 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. 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.

**END OF SECTION**

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**SECTION 01540 - SECURITY****PART 1 - GENERAL****1.01 SECTION INCLUDES**

- A. This Section provides for requirements of security, entry control, personnel identification and miscellaneous restrictions

**1.02 RELATED SECTIONS**

- A. Section 01010 - Summary of Work
- B. Other Sections as applicable.

**1.03 SECURITY PROGRAM**

- A. Protect Work, existing premises and Owner's operations from theft, vandalism and unauthorized entry.
- B. Initiate program in coordination with Owner's existing security system at job mobilization.
- C. Maintain program throughout construction period until Owner occupancy as directed by Engineer.

**1.04 ENTRY CONTROL**

- A. Restrict entrance of persons and vehicles into project site and existing facilities.
- B. Allow entrance only to authorized persons with proper identification.
- C. Maintain log of workmen and visitors, make available to Owner on request.
- D. Coordinate access of Owner's personnel to site in coordination with Owner's security forces.

**1.05 PERSONNEL IDENTIFICATION**

- A. Become familiar with Owner and Engineer representatives.
- B. Restrict access to job site to these representatives.

**PART 2 - PART 2 – PRODUCTS (NOT USED)****PART 3 - PART 3 - EXECUTION (NOT USED)****END OF SECTION**

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**SECTION 01550 - SITE ACCESS AND STORAGE****PART 1 - GENERAL****1.01 HIGHWAY LIMITATIONS**

- A. The Contractor shall make his 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.

**1.02 TEMPORARY CROSSINGS**

- A. N/A

**1.03 CONTRACTOR'S WORK AND STORAGE AREA**

- A. The Contractor shall make his own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the work.

**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION (NOT USED)****END OF SECTION**

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**SECTION 01570 - TRAFFIC REGULATION****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. The Work to be performed under this section shall include furnishing all materials and labor necessary to regulate vehicular and pedestrian traffic.

**1.02 REFERENCES**

- A. The Work under this Contract shall be in strict accordance with the following codes and standards.
1. The applicable municipality
  2. Broward County Traffic Engineering Division
  3. Florida Department of Transportation Specifications (DOT)
  4. OSHA Safety and Health Standards for Construction.
  5. Federal Highway Administration Manual of Uniform Traffic Control Devices for Streets and Highways (MUTCD)
  6. Federal Highway Administration Traffic Controls for Street and Highway Construction and Maintenance Operations

**1.03 RELATED SECTIONS**

- A. Section 01015 – General Requirements
- B. Section 01030 – Special Project Procedures
- C. Section 01505 – Control of Work
- D. Other Sections as applicable.

**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION****3.01 TRAFFIC AND VEHICULAR ACCESS:**

- A. Emergency Vehicles: No single family residence, multi-family residence, apartment, commercial building or place of employment shall be without access to emergency vehicles for a period longer than three hours. The Contractor shall notify in writing the Engineer, the police, fire and other emergency departments and agencies when and where work is to be accomplished that will affect their operations at least two days in advance of such work.

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- B. Major Road and Streets: No major roads or streets shall be blocked to traffic without adequate detour facilities for a period of more than 30 minutes or as directed by the governing authority.
- C. Residential Property: Access to residential property shall not be blocked for a period of more than 4 hours.

3.02 CONSTRUCTION IN OTHER THAN STATE HIGHWAY RIGHT-OF-WAY:

- A. N/A

3.03 MAINTENANCE OF TRAFFIC

- A. N/A

**END OF SECTION**

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**SECTION 01600 - MATERIAL AND EQUIPMENT****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Material and equipment incorporated into the Work.
  - 1. Conform to applicable specifications and standards.
  - 2. Comply with size, make, and type and qualify specified, or as specifically approved in writing by the Engineer.
  - 3. Manufactured and Fabricated Products.
    - a. Design, fabricate, and assemble in accord with the best engineering and shop practices.
    - b. Manufacture like part of duplicate units to standard sizes and gauges, to be interchangeable.
    - c. Two or more items of the same kind shall be identical, by the same manufacturer.
    - d. Products shall be suitable for service conditions.
    - e. Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
  - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

**1.02 RELATED SECTIONS**

- A. Section 01030: Special Project Procedures
- B. Section 01340: Shop Drawings, Product Data, and Samples
- C. Section 01720: Project Record Documents
- D. Other Sections as applicable.

**1.03 APPROVAL OF MATERIALS**

- A. Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the work without prior approval of the Engineer.
- B. Within 30 days after the effective date of the Agreement, the Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product and to form an opinion as to its conformity to the specifications. The data shall comply with Paragraph 1.07 of this Section. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, either prior to beginning or during progress of the work, the Contractor shall submit

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samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, the Owner will make arrangements for and pay for the tests.

- C. The Contractor shall submit data and samples sufficiently early to permit work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.
- D. In order to demonstrate the proficiency of workmen or to facilitate the choice among several textures, types, finishes, and surfaces, the Contractor shall provide such samples of workmanship or finish as may be required.
- E. The materials and equipment used on the work shall correspond to the approved samples or other data.

#### 1.04 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instruction, obtain, and distribute copies of such instructions to parties involved in the installation, including copies to the Engineer.
  - 1. 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 accord with such instructions and in conformity with specified requirements.
  - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.
  - 2. 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.

#### 1.05 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products in accord with construction schedules; coordinate to avoid conflict with work and conditions at the site.
  - 1. Deliver Products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
  - 2. Immediately upon delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that Products are properly protected and undamaged.
- B. Provide equipment and personnel to handle Products by methods to prevent soiling or damage to Products or packaging.

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## 1.06 STORAGE AND PROTECTION

- A. The Contractor shall furnish a covered, weather-protected storage structure, providing a clean, dry, noncorrosive environment for all mechanical equipment, valves, electrical and instrumentation equipment, and special equipment to be incorporated into this project. Storage of equipment shall be performed to allow easy access and be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including weather/humidity protection, connection of heaters, placing of storage lubricants in equipment, blocking, or skid storage, etc. Corroded, damaged, or deteriorated equipment and parts shall be replaced before acceptance of the project.
- B. Store Products in accord with manufacturer's instructions, with seals and labels intact and legible.
  - 1. Store products subject to damage by the elements in weather-tight enclosures.
  - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
  - 3. Store fabricated products above the ground, on blocking or skids, to prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
  - 4. Store loose granular materials in a well drained area on solid surfaces to prevent mixing with foreign matter.
- C. All materials and equipment to be incorporated in the work shall be handled and stored by the Contractor before, during, and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft or damage of any kind whatsoever to the material or equipment.
- D. All materials which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended or specified, shall be promptly removed from the site of the work, and the Contractor shall receive no compensation for the damaged material or its removal.
- E. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored Products to assure that Products are maintained under specific conditions, and free from damage or deterioration.
- F. Contractor shall be responsible for protection after installation by providing substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations.
- G. The Contractor shall be responsible for all materials, equipment, and supplies sold and delivered to the Owner under this Contract, until final inspection of the work and acceptance thereof by the Owner. In the event any such material, equipment, and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance, the Contractor shall replace same without additional cost to the Owner.

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- H. Should the Contractor fail to take proper action on storage and handling of equipment supplied under this Contract within seven days after written notice to do so has been given, the Owner retains the right to correct all deficiencies noted in previously transmitted written notice and deduct the cost associated with these corrections from the Contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administrative, clerical, engineering, and any other costs associated with making the necessary corrections.

## 1.07 SUBSTITUTIONS AND PRODUCT OPTIONS

### A. Products List

1. Within 30 days after the effective date of the Agreement, submit to the Engineer a complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.

### B. Contractor's Options

1. For Products specified only by reference standard, select any product meeting that standard.
2. For Products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications, subject to the base bid procedures outlined under Document 00400 – Supplemental Bid Form.
3. For products specified by naming one or more Products or Manufacturers and an "or equal", the Contractor must submit a request for substitutions of any Product or Manufacturer not specifically named.

### C. Substitutions

1. For a period of 30 days after the effective date of the Agreement, the Engineer will consider written requests from Contractor for substitution of Products.
2. Submit a separate request for each Product, supported with complete data, with drawings and samples as appropriate, including:
  - a. Comparison of the qualities of the proposed substitution with that specified
  - b. Changes required in other elements of the work because of the substitution
  - c. Effect on the construction schedule
  - d. Cost data comparing the proposed substitution with the Product specified
  - e. Any required license fees or royalties
  - f. Availability of maintenance service, and source of replacement materials
3. The Engineer shall be the judge of the acceptability of the proposed

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substitution.

4. No substitutions will be considered by the Engineer after 30 days from the Contract Date.

D. Contractor's Representation

1. A request for a substitution constitutes a representation that Contractor:
  - a. Has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified
  - b. Will provide the same warranties or bonds for the substitution as for the Product specified
  - c. 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
  - d. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

- E. The Engineer will review requests for substitutions with reasonable promptness, and notify Contractor, in writing, of the decision to accept or reject the requested substitution.

1.08 SPECIAL TOOLS

- A. Manufacturers of equipment and machinery shall furnish any special tools (including grease guns or other lubricating devices) required for normal adjustment, operations and maintenance, together with instructions for their use. The Contractor shall preserve and deliver to the Owner these tools and instructions in good order no later than upon completion of the Contract.

1.09 STORAGE AND HANDLING OF EQUIPMENT ON SITE

- A. Because of the long period allowed for construction, special attention shall be given to the storage and handling of equipment on site. As a minimum, the procedure outlined below shall be followed.
  1. Equipment shall not be shipped until approved by the Engineer. The intent of this requirement is to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the Engineer, unless upon arrival it is to be stored as specified in Paragraph 1.06. Operation and maintenance data, as described in Paragraph 1.08 of Section 01730 shall be submitted to the Engineer for review prior to shipment of equipment.
  2. Manufacturer's storage instructions shall be carefully studied by the Contractor and reviewed with the Engineer by him. These instructions shall be carefully followed and a written record of this kept by the Contractor.

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3. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested, and accepted in a minimum time period. As such, the manufacturer will guarantee the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense

#### 1.10 WARRANTY

- A. For all major pieces of equipment, submit a warranty from the equipment manufacturer as specified in Section 01740.

#### 1.11 SPARE PARTS

- A. Spare parts for certain equipment provided under Division 16 have been specified in the pertinent sections of the Specifications. The Contractor shall collect and store all spare parts so required in an area to be designated by the Engineer. In addition, the Contractor shall furnish to the Engineer an inventory listing all spare parts, the equipment they are associated with, the name and address of the supplier, and the delivered cost of each item. Copies of actual invoices for each item shall be furnished with the inventory to substantiate the delivered cost.

#### 1.12 LUBRICANTS

- A. N/A

#### 1.13 GREASE, OIL AND FUEL

- A. N/A
- B. The Contractor shall be responsible for changing the oil in all drives and intermediate drives of each mechanical equipment after initial break-in of the equipment, which in no event shall be any longer than three weeks of operation.

#### 1.14 PROTECTION AGAINST ELECTROLYSIS

- A. Where dissimilar metals are used in conjunction with each other, suitable insulation shall be provided between adjoining surfaces so as to eliminate direct contact and any resultant electrolysis. The insulation shall be bituminous impregnated felt, heavy bituminous coatings, nonmetallic separators or washers, or other acceptable materials.

#### 1.15 FASTENERS

- A. All necessary bolts, anchor bolts, nuts, washers, plates and bolt sleeves shall be furnished by the Contractor. Bolts shall have suitable washers and, where so required, their nuts shall be hexagonal.

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- B. All bolts, anchor bolts, nuts, washers, plates, and bolt sleeves shall be Type 316 stainless steel unless otherwise specifically indicated or specified.
- C. Unless otherwise specified, stud, tap, and machine bolts shall be of the best quality refined bar iron. Hexagonal nuts of the same quality of metal as the bolts shall be used.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION**

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**SECTION 01730 - OPERATING AND MAINTENANCE DATA****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.
  - 1. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of Specifications.
- B. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems.

**1.02 RELATED SECTIONS**

- A. Section 01030 – Special Project Procedures
- B. Section 01340 – Shop Drawings, Working Drawings and Samples
- C. Section 01700 – Contract Closeout
- D. Section 01720 – Project Record Documents
- E. Section 01740 – Warranties & Bonds
- F. Other Sections as applicable.

**1.03 QUALITY ASSURANCE**

- A. Preparation of data shall be done by personnel:
  - 1. Trained and experienced in maintenance and operation of described products.
  - 2. Familiar with requirements of this Section.
  - 3. Skilled as technical writers to the extent required to communicate essential data.
  - 4. Skilled as draftsman competent to prepare required drawings.

**1.04 FORM OF SUBMITTALS**

- A. Prepare data in form of an instructional manual for use by Owner's personnel.
- B. Format
  - 1. Size: 8 1/2 inches x 11 inches
  - 2. Paper: 20 pound minimum, white, for typed pages.
  - 3. Text: Manufacturer's printed data, or neatly typewritten.
  - 4. Drawings:

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- a. Provide reinforced punched binder tab, bind in with text.
  - b. Reduce larger drawings and fold to size of text pages, but not larger than 11 inches x 17 inches.
- 5. Provide fly-leaf for each separate product, or each piece of operating equipment.
  - a. Provide types description of product, and major component parts of equipment.
  - b. Provide indexed tabs.
- 6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS". List:
  - a. Title of Project
  - b. Identity of separate structure as applicable.
  - c. Identity of general subject matter covered in this manual.

#### C. Binders

- 1. Commercial quality three-ring binders with durable and cleanable plastic covers.
- 2. Maximum ring diameter shall be 2 inches.
- 3. When multiple binders are used, correlate the data into related consistent groupings.

### 1.05 CONTENT OF MANUAL

#### A. Neatly typewritten Table of Contents for each volume, arranged in systematic order.

- 1. Contractor, name of responsible principal, address, and telephone number.
- 2. A list of each product required to be included, indexed to content of the volume.
- 3. List, with each product, name, address, and telephone number of:
  - a. Subcontractor of installer
  - b. Maintenance contractor, as appropriate
  - c. Identify area of responsibility of each
  - d. Local source of supply for parts and replacement.
- 4. Identify each product name and other identifying symbols as set forth in Contract Documents.

#### B. Product Data

- 1. Include only those sheets which are pertinent to the specific product.
- 2. Annotate each sheet to:
  - a. Clearly identify specific product or part installed.
  - b. Clearly identify data applicable to installation.
  - c. Delete references to inapplicable information.

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## C. Drawings

1. Supplement product data with drawings as necessary to clearly illustrate:
  - a. Relations of component parts of equipment and systems.
  - b. Control and flow diagrams.
2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
3. Do not use Project Record Documents as maintenance drawing.

## D. Written text, as required to supplement product data for the particular installation:

1. Organize in consistent format under separate headings for different procedures.
2. Provide logical sequence of instructions of each procedure.

## E. Copy of each warranty, bond and service contract issued:

1. Provide information sheet for Owner's personnel, give:
  - a. Proper procedures in event of failure.
  - b. Instances which might affect validity of warranties or bonds

## 1.06 MANUAL FOR MATERIALS AND FINISHES

## A. Submit five copies of complete manual in final form.

## B. Content for architectural products, applied materials and finishes

1. Manufacturer's data, giving full information on products.
  - a. Catalog number, size, composition.
  - b. Color and texture designations.
  - c. Information required for re-ordering special-manufactured products.
2. Instructions for care and maintenance.
  - a. Manufacturer's recommendation for types of cleaning agents and methods.
  - b. Cautions against cleaning agents and methods which are detrimental to product.
  - c. Recommended schedule for cleaning and maintenance.

## C. Content, for moisture-protection and weather-exposed products

1. Manufacturer's data, giving full information on products
  - a. Applicable standards.
  - b. Chemical composition.
  - c. Details of installation.

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- 2. Instructions for inspection, maintenance and repair.
- D. Additional requirements for maintenance data: Respective sections of Specifications.
- E. Provide complete information for products specified.

#### 1.07 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit five copies of complete manual in final form.
- B. Content, for each unit of equipment and system, as appropriate:
  - 1. Description of unit and component parts.
    - a. Function, normal operating characteristics and limiting conditions
    - b. Performance curves, engineering data and tests
    - c. Complete nomenclature and commercial number of replaceable parts
  - 2. Operating procedures
    - a. Start-up, break-in, routine and normal operating instructions
    - b. Regulation, control, stopping, shut-down and emergency instructions
    - c. Summer and winter operating instructions
    - d. Special operating instructions
  - 3. Maintenance Procedures
    - a. Routine operations
    - b. Guide to "trouble-shooting"
    - c. Disassembly, repair and reassembly
    - d. Alignment, adjusting and checking
  - 4. Servicing and lubrication schedule
    - a. List of lubricants required
  - 5. Manufacturer's printed operating and maintenance instructions
  - 6. Description of sequence of operation by control manufacturer
  - 7. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance
    - a. Predicted list of parts subject to wear
    - b. Items recommended to be stocked as spare parts
  - 8. As-installed control diagrams by controls manufacturer
  - 9. Each contractor's coordination drawings
    - a. As-installed color coded piping diagrams
  - 10. Charts of valve tag numbers, with location and function of each valve



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11. List of original manufacturer's spare parts, manufacturer's current prices and recommended quantities to be maintained in storage
  12. Other data as required under pertinent sections of specifications
- C. Contents, for each electric and electronic system, as appropriate
1. Description of system and component parts
    - a. Function, normal operating characteristics, and limiting conditions
    - b. Performance curves, engineering data and tests
    - c. Complete nomenclature and commercial number of replaceable parts
  2. Circuit directories of panel-boards
    - a. Electrical service
    - b. Controls
  3. As-installed color coded wiring diagrams
  4. Operating procedures:
    - a. Routine and normal operating instructions
    - b. Sequences required
    - c. Special operating instructions
  5. Maintenance procedures
    - a. Routine operations
    - b. Guide to "trouble-shooting"
    - c. Disassembly, repair and reassembly
    - d. Adjustment and checking
  6. Manufacturer's printed operating and maintenance instructions
  7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
  8. Other data as required under pertinent sections of specifications
- D. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel.
- E. Additional requirements for operating and maintenance data: Respective sections of Specifications.
- F. Provide complete information for product specified.
- 1.08 SUBMITTAL SCHEDULE
- A. Submit two copies of preliminary draft of proposed formats and outlines of contents of Operation and Maintenance Manuals within 30 days after Notice to Proceed.
1. The Engineer will review the preliminary draft and return one copy with comments.

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- B. Submit two copies of completed data in final form no later than 30 days following the Engineer's review of the last shop drawing and submittal specified under Section 01340.
  - 1. One copy will be returned with comments to be incorporated into final copies.
- C. Submit specified number of copies of approved data in final form directly to the offices of the Engineer, Calvin, Giordano & Associates, within 30 calendar days of product shipment to the project site and preferably within 30 days after the reviewed copy is received.
- D. Submit six copies of addendum to the operation and maintenance manuals as applicable and certificates as specified in paragraph 1.01B of Section 01030 within 30 days after final inspection and plant start-up test.
- E. Final Operation and Maintenance submittals shall be in large three-ring binders organized by specification Section and plainly marked per paragraph 1.04Ca.

#### 1.09 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in operation, adjustment, and maintenance of products, equipment and systems.
- B. Operating and maintenance manual shall constitute the basis of instruction.
  - 1. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance.

#### 1.10 ENGINEER'S O & M CHECKLIST

- A. The Engineer will review Operation and Maintenance Manuals submittals on operating equipment for conformance with the requirements of this Section. The review will generally be based upon the *O&M Review Checklist* (presented on the pages at the end of this section for the benefit of the Contractor and his suppliers).

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

## O & M REVIEW CHECKLIST

EQUIPMENT SUBMITTED		DATE OF SUBMITTAL	
MANUFACTURER		DEGREE OF APPROVAL	
SPECIFICATION SECTION		DRAWING NUMBER	

- \_\_\_\_\_ Is the submittal correct for model/series/configuration originally submitted with shop drawings?
- \_\_\_\_\_ Is the binding correct with assigned color/printing etc.?  
(Pertains to final three volumes)
- \_\_\_\_\_ Is the submittal properly indexed?
- \_\_\_\_\_ Does the submittal pertain only to equipment being furnished?
- \_\_\_\_\_ Is the submittal easily understood and instructively arranged?
- \_\_\_\_\_ Does the submittal include start-up, shutdown and troubleshooting procedures?
- \_\_\_\_\_ Are sufficient drawings and schematics included to supplement written descriptions?
- \_\_\_\_\_ Is the listing of name plate data for each piece of supplied equipment provided and attached?
- \_\_\_\_\_ Are all submitted "C" and "D" size drawings printed on paper that is 11 inches high and folded to 8 1/2 inches wide?
- \_\_\_\_\_ Is proper and complete instruction for servicing included?
- \_\_\_\_\_ Is there a suggested operating log sheet for equipment?
- \_\_\_\_\_ Is schedule for lubrication provided?
- \_\_\_\_\_ Is there a recommended preventative maintenance schedule?
- \_\_\_\_\_ Are necessary safety precautions clearly indicated where they relate to the equipment?
- \_\_\_\_\_ Is the Area Representative information provided, i.e., Name, Address, Telephone Number?
- \_\_\_\_\_ Are specified spare parts indicated and listed?

The following are the points of rejection requiring resubmittal by Contractor:

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**END OF SECTION**

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**SECTION 01740 - WARRANTIES AND BONDS****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Compile warranties and bonds as specified in the Contract Documents.
- B. Co-execute submittals when so specified.
- C. Review submittals to verify compliance with Contract Documents.
- D. Submit to the Engineer for review and transmittal to Owner.

**1.02 RELATED SECTIONS**

- A. Section 00100 - Instructions to Bidders
- B. Section 00700 – General Conditions of the Construction Contract
- C. Section 01030 - Special Project Procedures
- D. Section 01700 - Contract Closeout
- E. Other Sections as applicable.

**1.03 SUBMITTAL REQUIREMENTS**

- A. Assemble warranties, bond, service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Number of original signed copies required: two (2) each.
- C. Table of Contents: neatly typed, in orderly sequence. Provide complete information for each item.
  - 1. Product or work item
  - 2. Firm, with name of principal, address and telephone number
  - 3. Scope
  - 4. Date of beginning of Warranty, bond or service and maintenance contract
  - 5. Duration of warranty, bond or service maintenance contract
  - 6. Provide information for Owner's personnel:
    - a. Proper procedure in case of failure
    - b. Instances which might affect the validity of warranty or bond
  - 7. Contractor, name of responsible principal, address and telephone number

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**1.04 FORM OF SUBMITTALS**

- A. Prepare in duplicate packets
- B. Format:
  - 1. Size 8 1/2 inches x 11 inches, punch sheets for standard 3-post binder
  - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
    - a. Title of Project
    - b. Name of Contractor
- C. Binders: Commercial quality, three-post (3) binder, with durable and cleanable plastic covers and maximum post width of 2 inches.

**1.05 WARRANTY SUBMITTAL REQUIREMENTS**

- A. For all equipment, submit a one-year warranty from the equipment manufacturer, unless otherwise specified. The manufacturer's warranty period shall be concurrent with the Contractor's for one year commencing at the time of acceptance by the Owner.
- B. In the event that the equipment manufacturer or supplier is unwilling to provide a one-year warranty commencing at the time of Owner acceptance, the Contractor shall obtain from the manufacturer a two (2) year warranty commencing at the time of equipment delivery to the job site. This two-year (2) warranty from the manufacturer shall not relieve the Contractor of the one-year warranty starting at the time of Owner acceptance of the equipment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION**

**SECTION 01770 - CLOSEOUT PROCEDURES****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
  - 2. Division 01 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
  - 3. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 4. Other Sections as applicable.

**1.3 ACTION SUBMITTALS**

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

**1.4 CLOSEOUT SUBMITTALS**

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

**1.5 MAINTENANCE MATERIAL SUBMITTALS**

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

## 1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of **ten (10)** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
  3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  4. Submit maintenance material submittals specified in individual Divisions 02 through 33 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by City. Label with manufacturer's name and model number where applicable.
    - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain City's signature for receipt of submittals.
  5. Submit test/adjust/balance records.
  6. Submit sustainable design submittals required in Division 01 sustainable design requirements Section and in individual Division 02 through 33 Sections.
  7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of **ten (10)** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment.
  4. Perform preventive maintenance on equipment used prior to Substantial Completion.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Division 01 Section "Demonstration and Training."
  6. Advise Owner of changeover in heat and other utilities.
  7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
  8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

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9. Complete final cleaning requirements, including touchup painting.
  10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of **ten (10)** days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Construction Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Construction Project Manager will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by City, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
  2. Results of completed inspection will form the basis of requirements for final completion.

### 1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
  2. Certified List of Incomplete Items: Submit certified copy of City's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by City. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of **ten (10)** days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Construction Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Construction Project Manager will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

### 1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, **starting with exterior areas first and proceeding from lowest floor to highest floor.**
  2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  3. Include the following information at the top of each page:



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- a. Project number and name.
  - b. Date.
  - c. Name of Inspector
  - d. Name of Contractor.
  - e. Page number.
4. Retain and revise one of four subparagraphs below if default submittal format in Division 01 Section "Submittals Procedures" is not appropriate. Due to nature of punch list process, electronic worksheet software is often preferred file type. Submit list of incomplete items in the following format:
    - a. City of Fort Lauderdale Punch List Inspection Form
    - b. MS Excel electronic file. Construction Project Manager will return annotated file.
    - c. PDF electronic file. Construction Project Manager will return annotated file.
    - d. Three (3) paper copies. Construction Project Manager will return two (2) copies.

## 1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Construction Project Manager for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within fifteen (15) days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
  1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
  2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
  4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

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1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

**PART 3 - EXECUTION****3.1 FINAL CLEANING**

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - f. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
    - g. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
    - h. Leave Project clean and ready for occupancy.
- C. Pest Control: N/A
- D. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls" and Division 01 Section "Construction Waste Management and Disposal."

**3.2 REPAIR OF THE WORK**

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly

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adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
  - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

**END OF SECTION**

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**SECTION 01780 - CONTRACT CLOSEOUT****PART 1 GENERAL****1.01 SUBMITTALS****A. Informational Submittals:**

1. Submit prior to application for final payment.
  - a) Record Documents.
  - b) As-built drawings (signed and sealed hardcopies and electronic format – PDF and CAD files)
  - c) Special Bonds, Special Guarantees, and Service Agreements.
  - d) Consent of Surety to Final Payment.
  - e) Releases or Waivers of Liens and Claims.
  - f) Releases from Agreements.
  - g) Final Application for Payment: Submit in accordance with procedures and requirements stated in Section 001025, Measurement and Payment.
  - h) Spare Parts, Special Tools and Extra Materials: As required by individual Specification sections.

**A. Subcontractor Identification Form:**

1. Submit form with final pay request.
2. Submit a separate form for each subcontractor used.
3. For Capital Improvement Projects, submit form along with final pay request to the PCM.
4. Form is attached as a Supplement to this Section.

**1.02 RECORD DOCUMENTS****A. Quality Assurance :**

1. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.
2. Accuracy of Records:
  - a. 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.
  - b. 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.
3. Make entries within 24 hours after receipt of information that a change in the Work has occurred.

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4. 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.

### 1.03 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:
  1. Inform PCM of the reasons.
  2. 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.
  3. 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.
  4. 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.

### 1.04 AS-BUILT DRAWINGS

- A. Quality Assurance
  1. 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.
  2. As-built drawings will be submitted in both electronic and hard copy forms as follow:
    - a. 3 hard copy sets of as-builts will be submitted on 24x36 paper signed, sealed, and dated by a Florida Professional Licensed Surveyor (PLS).
    - b. 1 CD or jump drive which will include both DWG files for the package and a PDF document including the surveyors signature and seal.
  3. As-built drawings will include the following:
    - a. PLS name, business name, license numbers, address, and telephone number
    - b. 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

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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-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.
4. 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), except in cases where a permitting agency requires an as-built.

1. Show the location of easements used by the water and wastewater facilities.
2. Indicate pipe joint locations where water and wastewater or reclaimed water piping crosses.
3. Indicated the length of gravity wastewater piping and actual slope between manhole centers.
4. Show all abandoned in place facilities including the extent and method of abandonment.
5. 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.
6. 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**

### **3.01 MAINTENANCE OF RECORD DOCUMENTS**

#### **A. General:**

1. 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.
2. Delete Engineer title block and seal from all documents.
3. Label or stamp each record document with title, “RECORD DOCUMENTS,” in neat large printed letters.
4. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not

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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 provide access to the City for review at any time.

5. All piping inserts, fittings, and valve locations shall be located by a Florida Licensed Surveyor in accordance with City of Fort Lauderdale 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:

1. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
2. Make documents and Samples available at all times for observation by PCM or Engineer.

C. Making Entries on Drawings:

1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
  - a. Color Coding:
    - 1) Green when showing information deleted from Drawings.
    - 2) Red when showing information added to Drawings.
    - 3) Blue and circled in blue to show notes.
2. Date entries.
3. Call attention to entry by "cloud" drawn around area or areas affected.
4. Legibly mark to record actual changes made during construction, including, but not limited to:
  - a. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.
  - b. 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.
  - c. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
  - d. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
  - e. 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.
5. 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.
  - a. Clearly identify the item by accurate notes such as "cast iron drain," "galv. water," and the like.
  - b. Show, by symbol or note, vertical location of item ("under slab," "in ceiling plenum," "exposed," and the like).
  - c. Make identification so descriptive that it may be related reliably to Specifications.

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**D.Coordination with Florida Licensed surveyor:**

1. 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.
- 2.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.

**3.02 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.
  1. Leave the Work and adjacent areas affected in a cleaned condition satisfactory to Owner and PCM.
  2. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces.
  3. Repair, patch, and touch up marred surfaces to specified finish and match adjacent surfaces.
  4. Rake clean all other surfaces.
- A. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.
- B. Meet all requirements of Section 02575, Surface Restoration.

**3.03 SUPPLEMENTS**

- A. The supplements listed below, following "END OF SECTION," are part of this Specification.
  1. Subcontractor Identification Form.

**END OF SECTION**





## **SUBCONTRACTOR IDENTIFICATION FORM**

This form shall be completed by all City of Fort Lauderdale Prime Contractors who subcontracted out any portion of his/her City contract. The form shall be forwarded to the City of Fort Lauderdale's Public Services Department (Engineering and Architectural Services) with the prime contractor's final pay request. A separate form is to be completed and submitted for each subcontractor. Please telephone (954) 761-5057 or 761-5083, if you have any questions regarding this form.

1) CITY OF FORT LAUDERDALE PROJECT NO. \_\_\_\_\_

2) PROJECT DESCRIPTION \_\_\_\_\_

3) SUBContractor \_\_\_\_\_

\_\_\_\_\_  
*Business Name*

\_\_\_\_\_  
*Address*

\_\_\_\_\_  
*Telephone & Fax Nos.*

\_\_\_\_\_  
*Email Address/Company Website (if applicable)*

4) SUBCONTRACTOR'S PRINCIPAL OFFICER \_\_\_\_\_

5) CLASSIFICATION OF WORK SUBCONTRACTED OUT \_\_\_\_\_

6) COST OF WORK SUBCONTRACTED OUT \_\_\_\_\_

7) Please check the item(s) which properly identify the ownership status of the subcontractor's firm:

☐ Subcontractor firm is not a MBE or WBE

☐ Subcontractor firm is a MBE, as at least 51 percent is owned and operated by one or more socially and economically-disadvantaged individuals:

☐ American Indian    ☐ Asian    ☐ Black    ☐ Hispanic    ☐ White

☐ Subcontractor firm is a WBE, as at least 51 percent is owned and operated by one or more women.

☐ American Indian    ☐ Asian    ☐ Black    ☐ Hispanic    ☐ White

8) **PRIME Contractor** \_\_\_\_\_

\_\_\_\_\_  
**NAME & TITLE OF PRIME CONTRACTOR'S REPRESENTATIVE COMPLETING THIS FORM** (*Please Print*)

\_\_\_\_\_  
(Telephone No.)

\_\_\_\_\_  
(Fax No.)

\_\_\_\_\_  
(Email Address)

**SIGNATURE** \_\_\_\_\_ **DATE** \_\_\_\_\_

*Prime Contractor's Representative*

PROVIDENT PARK-SITE LIGHTING DESIGN FOR ADDITION  
CITY OF FORT LAUDERDALE  
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## SECTION 02210

## FINISH GRADING

## PART 1 - GENERAL

## 1.01 DESCRIPTION

- A. Provide all labor, materials, necessary equipment or services to complete the Finish Grading work, as indicated on the Contract Documents.

## 1.02 RELATED SECTIONS

- A. Section 02420 – Soil Preparation and Soil Mixes
- B. Section 02430 – Sodding
- C. Section 02450 – Tree and Plant Protection
- D. Other Sections as applicable.

## 1.03 SITE INSPECTION

- A. The Contractor shall visit the site and acquaint himself with all existing conditions. The Contractor shall be responsible for his own subsurface investigations, as necessary, to satisfy requirements of this Section. All subsurface investigations shall be performed only under time schedules and arrangements approved in advance by the Engineer or Owner's Representative.

## 1.04 EXISTING CONTOURS

- A. The existing elevations shown on the drawings are approximate only. The contractor is responsible for grading to meet existing elevations as required.
- B. The contours and elevations established under contract will be the finished grades shown. The Contractor under this Contract shall perform the work for construction using the finished grades previously established and making whatever corrections and/or repairs to grades to make them consistent with the requirements of the drawings and specifications.

## 1.05 UTILITIES

- A. Before starting site operations verify that the earlier contractors have disconnected all temporary utilities which might interfere with the fine grading work.
- B. Locate all existing, active utility lines traversing the site and determine the

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requirements for their protection. Preserve in operating condition all active utilities adjacent to or transversing the site that are designated to remain.

- C. Observe rules and regulations governing respective utilities in working under requirements of this section. Adequately protect utilities from damage, remove or relocate as indicated, specified or required. Remove, plug or cap inactive or abandoned utilities encountered in excavation. Record location of active utilities.

#### 1.06 QUALITY ASSURANCE

- A. Requirements of all applicable building codes and other public agencies having jurisdiction upon the work.
- B. Primary emphasis should be given to the aesthetic appearance and functioning of berming and swales, as directed by the Engineer or Owner's Representative. The Contractor shall employ skilled personnel and any necessary equipment to ensure that finish grading is smooth, aesthetically pleasing, drains well, and is ideal for receiving sod and plant materials.
- C. As-build survey drawings of all finished grading are to be submitted to the Engineer for review prior to landscape installation or agency certifications.

#### PART 2 - MATERIALS

##### 2.01 TOP SOIL

- A. Refer to Related Sections for material specifications.
- B. In areas to receive turf, rough grade shall be a minimum of 2 inches below finished grades.
- C. Rough grade fill is to be fine, compacted, satisfactory fill material, with no rocks larger than 2-inches.
- D. Both surface and subsurface, both before and after fill operations, shall be checked to confirm that percolation/compaction levels meet the needs of the proposed planting for that area.

#### PART 3 - EXECUTION

##### 3.01 EXCAVATION

- A. Excavate where necessary to obtain subgrades, percolation, and surface drainage as required.
- B. All unsatisfactory soil materials are to be removed and replaced with satisfactory

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soil materials.

- C. Remove entirely any existing obstructions after approval by the Engineer's or Owner's Representative.
- D. Remove from site and dispose of debris and excavated material not required.

### 3.02 GRADING

- A. The Contractor shall establish finished grades as shown on the Engineers grading plans, and as directed by Engineer and/or Owner's Representative, including areas where the existing grade has been disturbed by other work.
- B. Finished grading shall be smooth, aesthetically pleasing, drain well and ready to receive sod and other plant material to full satisfaction of Engineer and Owner's Representative.
- C. Finish grading accuracy is to be within 1/10 foot of specified elevations.
- D. Finish grading is to be performed using hand raking throughout and shall remove all objectionable material and rocks greater than 1 inch in diameter.
- E. A finish grading inspection is required prior to sod placement.

### 3.03 COMPACTION

- A. Compact each layer of fill in designated areas only with equipment that has been approved by the Engineer or Owner's Representative.
  - 1. In landscaped areas, compaction shall not exceed 85% of maximum density and no less than 75%.
  - 2. In landscaped areas which are sloped at 1:4 or steeper, compaction shall not exceed 90% of maximum density and no less than 85%.
- 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. Compaction in limited areas shall be obtained by the use of 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.

### 3.04 CORRECTION OF GRADE

- A. Bring to required grade levels areas where settlement, erosion, or other grade

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changes occur. Adjust grades as required to carry drainage away from buildings and to prevent ponding around the buildings and on pavements.

- B. All soil surfaces shall have sufficient percolation and surface drainage to support grasses and plant material.
- C. Contractor shall be responsible for stabilizing grades by approved methods prior to landscaping, and shall be responsible for correction of grades as mentioned above, and cleanup of any wash outs or erosion.

END OF SECTION

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## SECTION 02420

## SOIL PREPARATION AND SOIL MIXES

## PART 1 - GENERAL

## 1.01 DESCRIPTION

- A. Provide all labor, materials, necessary equipment and services to complete the soil preparation and soil mixes work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".
- B. Including, but not limited to:
  - 1. Topsoil
  - 2. Soil Conditioners
  - 3. Planting Soil Mixes

## 1.02 RELATED WORK

- A. Section 24210 – Finish Grading
- B. Section 02430 – Sodding
- C. Section 02450 – Tree and Plant Protection
- D. Other Sections as applicable.

## 1.03 QUALITY ASSURANCE

- A. Testing Agency: Approved Independent testing laboratory utilizing EPA, ASTM, USGS methods.
- B. Requirements or Regulatory Agencies: Conform to requirements of all Municipal, County and State agencies.
- C. Reference standards.

## 1.04 SUBMITTALS:

- A. Test Reports: Test reports shall consist of pH range, major and minor element analysis, including but not limited to Ammonia,, Nitrate, Phosphorus, Potassium, Magnesium, Calcium, Sulfur, Boron, Zinc, Manganese, Iron, Copper and soluble salt and any other materials designed by the Landscape Architect. Recommendations shall be made by the testing agency as to the type and quantity of soil additives

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required to bring the nutrient and ph to an acceptable or optimum range for planting. Reports shall be identified by project name, date, and soil mix type.

1. Results of topsoil (on-site existing soil) analysis.
  2. Results of planting/top soil mix(es) analysis: One test required per each type of soil mix.
- B. Certificates:
1. The Contractor must submit certificates from suppliers stating that the planting/topsoil mix, turfgrass sod and other landscape material used comply with requirements specified.
  2. Manufacturer's certificate of fertilizer's chemical composition including but not limited to percentage and derivation of nitrogen, phosphorus, potassium, and micronutrients.
  3. Testing laboratory certification that content of soil conditioners meet specification requirements.
- C. Soil Samples:
1. Submit a one-pound sample of each soil mix specified.
- D. All State, County and Municipal governmental regulations must be met including any licensing or certifications requirements for uses or applications.
- E. Costs of all submittals, including but not limited to Test reports, Certificates, Licenses, and samples will be borne by the Contractor.

## 1.05 JOB CONDITIONS

- A. Contractor shall become familiar with the site and the required work to complete this section in accordance with the drawings and what is specified herein.
- B. Responsibility for finish grading shall occur under a separate contract. Any changes, modifications, or disturbances to the finish grading shall be corrected by the responsible contractor.
- C. PROTECTION: Protect and avoid any damage whatsoever to existing walks, pavement, curbs, utilities, plant material, and any other existing work.

## PART 2 - PRODUCTS

## 2.01 TOP SOIL

- A. Topsoil shall be an 80-20 mix, 80% fresh water sand (medium to coarse grade) and 20% inland glades muck thoroughly mixed with a commercial shredder/Blender.

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equivalent. It shall be suitable for ornamental plant growth and free from hard clods, stiff clay, hardpan, gravel, subsoil, brush, large roots, weeds, refuse or other deleterious material, and of reasonably uniform quality. No site mixing will be acceptable.

- B. Mechanical analysis: Topsoil and soil mixture(s) shall meet these specifications and the following mechanical analysis, and shall be proportioned by volume rather than by weight.

Sieve Size	% Passing By Dry Weight
1 inch	99-100
1/4 inch	97-99
No. 100	40-60

Materials larger than one-half inch shall be disposed of off the site or as directed by the architect. Existing leaf litter and plant material shall be excluded from topsoil and soil mix.

- C. Maximum Soluble Salts: 300 ppm.
- D. Sterilize topsoil to be used in soil mixture(s) to make free of all viable nut grass, and other undesirable weed seeds.
- E. A sample of the sand and a sample of the 80-20 sand and muck mixture shall be submitted to the Owner for approval prior to installation.
- F. The Landscape Architect has the right to reject topsoil utilized at anytime during the execution of work that does not meet specifications. Topsoil and planting soil will be tested at Owners request for suitability of horticultural use.

## 2.02 SOIL CONDITIONERS

- A. Dolomitic Limestone: Approved product, designated for agriculture use.
- B. Aluminum Sulfate: Manufacturer's standard commercial grade.
- C. Florida Peat: Suitable for plant growth, capable of sustaining vigorous plant growth, and specifically pulverized for agricultural use. Florida peat shall be free of deleterious materials that would be harmful to plant growth, shall be free of nematodes, shall be of uniform quality, and shall have a pH value between 5.5 and 6.5 (as determined in accordance with ASTM E70). Florida peat shall be sterilized to make free of all viable nut grass and other undesirable weeds.
- D. Pesticides: As recommended by applicable Agricultural Public Agencies.
- E. Herbicides: As recommended by applicable Agricultural Public Agencies.
- F. Soil Fumigants: As recommended by applicable Agricultural Public Agencies.

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## G. Fertilizer:

1. Specified commercial grade fertilizer to comply with State of Florida Fertilizer laws. Chemical designation shall be as specified with at least 50% of the nitrogen derived from a non-water soluble organic source and all potash to be derived from sulfate forms for all plantings excluding sod and plantings on the lake edges.

Chemical designation shall be as specified with at least 80% of the nitrogen derived from a non-water-soluble organic source and all potash to be derived from sulfate forms for all sod and plantings on lake edges.

The following minor elements shall be included:

2.2% ZnO	0.25% CuO
4.0% MgO	0.005% Fe <sub>2</sub> O <sub>3</sub>
0.5% MnO	0.1% B <sub>2</sub> O <sub>3</sub>

- a. Federal Specifications O-F0241 Type 1, Grade A or B.
  - b. The chemical designation for granular fertilizer for all plantings shall be 12-8-8.
- H. Water: Free of substances harmful to growth of plants. Water shall also be free of staining agents as well as elements causing odors.
- I. Soil Sterilizers: As recommended by State and Local Agriculture agencies.
- J. Sand: Clean, white, coarse-grained builders sand, free of substances harmful to growth of plants.
- K. Supply complete information on all analysis/test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals to Landscape Architect prior to placement of soil conditioners. Landscape contractor shall make all modifications and improvements to soil and soil mixes deemed necessary by Landscape Architect to meet requirements herein, and to ensure proper growing medium for all plant material without cost to Owner, prior to planting.

## 2.03 PLANTING SOIL MIXES

- A. Planting soil shall be an evenly blended mixture of 80% sand/20% muck, (with any other soil conditions per Testing Agency recommendations) specified to each cubic yard of soil and thoroughly mix. Mix shall be suitable for plant growth and free from hard clods, stiff clay, hardpan, gravel, brush, large roots, nematodes, weeds, refuse, or other deleterious material, and of reasonably uniform quality.
- B. Palms: Planting soil mixture to be placed as backfill around the root balls of all Palms shall consist of a mixture as specified above.

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Note: Bottom 1/4 of planting pit shall be backfilled with clean, coarse-grained builder's sand.

- C. Trees, Shrubs, and Groundcovers: Planting soil mixture to be placed as backfill around the root balls of all trees, shrubs, and groundcovers shall consist of a mixture of 80% sand and 20% muck.
- D. Sterilize planting soil mixtures to make free of all viable nut grass, and other undesirable weed seeds.
- E. All planting soil mixes shall be thoroughly blended to form a uniform planting medium suitable for exceptional plant growth.
- F. Test PH of existing soil and planting soil mixtures by method acceptable to current industry standards. If pH is not between 6.0 and 7.0, add approved soil conditioner/additive to bring PH within that range.
- G. Supply complete information on all analysis/test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals and recommendations shall be made by the testing agency as to the type and quantity of soil additives required to bring the nutrient and pH to an acceptable or optimum range for planting to Landscape Architect prior to placement of soil mixtures. In addition, provide Landscape Architect with thoroughly mixed sample of all soil mixes for approval prior to placement (note PH ranges). Landscape Contractor shall make all modification and improvement to soil mixes deemed necessary by Landscape Architect to meet requirements herein, and to ensure proper growing medium for all plant material without cost to Owner, prior to planting.

## PART 3 - EXECUTION

### 3.01 INSPECTIONS

- A. Examine areas to receive soil preparation to assure work of other trades has been completed.
- B. Verify that plants to remain undisturbed have been clearly identified and protected from injury during construction. If not, identify and protect plants to remain according to procedures set forth in Section 02450 – Trees and Plant Protection. Also, refer to Protective Fencing Details on plans.
- C. Remove all construction materials and debris from all areas to be landscaped, without additional expense to Owner, prior to subsoil preparation.
- D. Do not proceed with soil preparation until all unsatisfactory conditions are corrected.

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### 3.02 SITE PREPARATION

- A. General: Within the entire area to be landscaped as shown on the drawings, the contractor shall complete the following site topsoil preparation items to eradicate all existing weed and/or natural groundcover. Initiate site topsoil preparation as stated herein and coordinate all work with the existing underground sprinkler system and electrical lines.
- B. Post Emergence Herbicide: Apply "Roundup" as manufactured by Monsanto Corp. according to manufacturer's recommended rate and specification within the limits of all areas to be landscaped not specified as existing, to be relocated, or to be removed. Protect existing plants from overspray.
- C. Pre-Emergence Herbicide: Apply "Ron-Star" or approved equal to all areas to be landscaped according to the manufacturer's recommended rate and specification. Contractor shall be responsible to re-apply appropriate herbicide to eradicate all remaining weeds and maintain a weed-free condition in all areas throughout all landscape planting operations.

### 3.03 PERFORMANCE

- A. Subsoil: Remove all debris, gravel, rocks and other deleterious material, within 12 inches of surface in areas to receive topsoil mixture, from the project site. Fine grade subsoil to assure finish grades are achieved by adding the specified depth of topsoil/planting mixture.
- B. Soil mixtures:
  - 1. Remove rocks and other objects
  - 2. Smooth soil mixtures to two 2 inches below top of surrounding paving, wherever planting beds abut paved surfaces.
  - 3. Do not compact planting soil mixture, but do wet-soak planting areas to assure proper settlement. Replace topsoil/planting soil mixture to specified grade after watering, where necessary.
  - 4. Smooth topsoil to two inches (2") below finish grade in areas to be sodded. Remove plant material not indicated as existing or be relocated in order to adhere to sod lines.
  - 5. Prior to installing planting soil, test tree pits and planting areas for percolation. If areas do not drain, it is the contractor's responsibility to assure percolation by approved means.
  - 6. Remove limerock or soil cement in tree planter islands within paved parking areas at the depth specified on the plans. Do not damage sub-base

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material for paved surfaces. Assure percolation and then backfill with approved planting soil mix.

3.04 CLEAN-UP

- A. Immediately clean up spills, soil and conditioners on paved and finished surface areas.
- B. Remove debris and excess materials from project site immediately.

END OF SECTION

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## SECTION 02430

## SODDING

## PART 1 - GENERAL

## 1.01 DESCRIPTION

- A. Provide all labor, materials, necessary equipment and services to complete the turfgrass Sodding work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

## 1.02 RELATED SECTIONS

- A. Section 02210 – Finish Grading
- B. Section 02210 – Soil Preparation and Soil Mixes
- C. Section 02450 – Tree and Plant Protection
- D. Other Sections as applicable.

## 1.03 QUALITY ASSURANCE

- A. Standards: Federal Specifications (FS) 0-F-241c (1), Fertilizers, Mixed, Commercial.
- B. Requirements or Regulatory Agencies: Conform to the requirements of the State Department of Agriculture.

## 1.04 SUBMITTALS

- A. Growers Certifications:
  - 1. Turfgrass Sod species and location of field from which turfgrass sod is cut.
  - 2. Compliance with state and federal quarantine restrictions. Manufacturer's certification of fertilizer and herbicide composition.
  - 3. All Contractors' licenses and or certifications for the uses and or application of herbicides, pesticides and fertilizers per the State, County and governing municipality.

## 1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver turfgrass sod on pallets.
- B. Protect root system from exposure to wind or sun.
- C. Protect turfgrass sod against dehydration, contamination, and heating during transportation and delivery. Such protection shall encompass the entire period during which the turfgrass sod is in transit, being handled, or in temporary storage. Evidence of inadequate protection against drying out shall be cause for rejection.
- D. Do not deliver more turfgrass sod than can be installed within 24 hours.
- E. Keep stored turfgrass sod moist and under shade, or covered with moistened burlap.
- F. Do not break, tear, stretch, or drop turfgrass sod. The Landscape Architect may

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reject sod that has been damaged by poor handling.

- G. Unless otherwise authorized by Landscape Architect, the Contractor shall notify the Landscape Architect at least 48 hours in advance of anticipated delivery date of the turfgrass sod. A legible copy of the invoice showing species and variety of the turfgrass sod included for each shipment shall be submitted to the Landscape Architect for approval.

#### 1.06 JOB CONDITIONS

- A. Begin installation of turfgrass sod after preceding related work is accepted.
- B. Environmental Requirements:
  - 1. Install turfgrass sod during months acceptable to the Landscape Architect.
  - 2. Do not install turfgrass sod on saturated soil.
- C. Protection: Erect signs and barriers against vehicular traffic on areas prepared for sod.

#### 1.07 GUARANTEE

- A. Guarantee turfgrass sod for period of twelve months after date of Final Approval.
- B. Replacement turfgrass sod under this guarantee shall be guaranteed for twelve months from the date of installation.
- C. Repair damage to other plants during turfgrass sod replacement at no cost to the Owner.

### PART 2 - PRODUCTS

#### 2.01 TURFGRASS SOD

- A. Turfgrass Sod Species: Refer to species indicated on approved landscape plans.
  - 1. Turfgrass Producers International Grade: Premium Grade Turfgrass Sod.
- B. All turfgrass sod shall conform to the following requirements:
  - 1. Furnish in pads that are not stretched, broken, or torn.
    - a. Turfgrass Sod pads shall be 18x24 inches in size (plus or minus 5%) with a 1-1/2 inch thickness (excluding top growth and thatch). Broken and torn or uneven ends will not be accepted.
  - 2. Uniformly mowed height when harvested:
    - a. Turfgrass Sod - 2 inches in height.
  - 3. Thatch: Maximum 1/2 inch uncompressed.
  - 4. Inspected and found free of diseases, nematodes, pests, and pest larvae, by entomologist of State of Florida Department of Agriculture.
  - 5. Weeds:
    - a. Free of horse grass, nut grass or other objectionable weeds or weed seeds.

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6. Uniform in green color, leaf texture, and density.

## 2.02 WATER

A. Free of substances harmful to plant growth, objectionable odor or staining agents.

## 2.03 FERTILIZER

A. FS 0-F-241c(1), Grade A or B.

B. The Chemical designation for slow release granular fertilizer with minor trace elements in addition to 12% Nitrogen, 8% Phosphorous, and 8% Potassium (Lesco or approved equal) shall have at least 50% of the nitrogen from a non-water-soluble organic source for all plantings except on lake banks.

C. Apply and distribute by methods and rates as recommended by manufacturer.

D. All State, County, and Municipal governmental regulations must be met including any licensing or certification requirements for uses and/or applications.

## 2.04 HERBICIDES

A. As recommended by the State of Florida Department of Agriculture.

B. Post-emergent Herbicide: Roundup as manufactured by Monsanto Corp. or approved equal.

C. Pre-emergent Herbicide: Ron Star or approved equal.

D. When next to an aquatic water body, an approved aquatic herbicide or approved equal must be utilized that will meet the State, County or Municipal requirements.

E. All State, County and municipal governmental regulations must be met including any licensing or certification requirements for uses or applications.

## PART 3 - EXECUTION

### 3.01 INSPECTION

A. Verify that excavation for turfgrass sod is 4 inches below finish grade and approved Planting/Top Soil Mix to depth of 2 or more inches for turfgrass sod (2 inches) to meet finish grade.

B. Water dry soil to depth of 6 inches 48 hours before turfgrass sodding.

### 3.02 INSTALLATION

A. All areas to be turfgrass sodded shall receive finish grading per Section 02210.

B. Transplant turfgrass sod within 48 hours after harvesting.

C. Turfgrass Sod coverage must provide 100% coverage at Final Approval.

D. Begin turfgrass sodding at bottom of slopes. When installing turfgrass sod adjacent to a water body, install turfgrass sod to the waterline.

E. Lay first row of turfgrass sod in straight line with long dimension of pads parallel to slope contours.

F. Butt side and end joints. Ensure that joints are tight, thereby eliminating the need to

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patch and/or top-dress to eliminate gaps.

- G. Stagger end joints in adjacent rows.
- H. Do not stretch or overlap rows.
- I. Water turfgrass sod immediately after transplanting.
- J. Top dressing for turfgrass sodded areas may be clean sand(sterilized), mined from fresh water sources. Sand mined from salt water is unacceptable. Sand shall be free from construction debris, weeds, turfgrass sod, biodegradable materials, noxious pests and diseases and other deleterious materials.

### 3.03 LAWN ESTABLISHMENT

- A. Maintenance of sodded areas shall begin immediately after so installation and shall continue until final approval. Maintenance shall consist of protecting, watering, weeding, cutting, fertilizing, repairing eroded area and re-sodding dead and or damaged turfgrass sod.
- B. Watering:
  - 1. Keep turfgrass sod moist during first week after planting.
  - 2. After first week, supplement rainfall to produce a total of 2 inches per day until final acceptance.
  - 3. It is the contractors' responsibility to water all plant material.
- C. Mowing:
  - 1. Maintain turfgrass sod between 2 inches and 2-1/2 inches in height. When turfgrass sod reaches 3 inches in height, mow to 2 inches in height.
  - 2. Do not cut off more than 40% of grass leaf in single mowing.
  - 3. Remove all turfgrass sod clippings throughout.
- D. Re-turfgrass sod areas which in the opinion of the Landscape Architect is required to establish a uniform stand of turfgrass sod.
- E. Weed Eradication:
  - 1. Apply specified or approved equal post-emergent herbicide per manufacture's rate and method of application to all areas to receive sod.
  - 2. Apply specified or approved equal pre-emergent herbicide before sodding and between second and third mowing, per manufacturer's rate and method of applications.
  - 3. Verify that the herbicide and applicant technique will not damage sod prior to application, and replace all damaged sod and any other landscaping due to herbicide at no cost to the owner.
- F. Fertilizer: Apply fertilizer uniformly at manufacturer's recommended rate 30 days after turfgrass sodding and at three-month intervals thereafter. Water in to avoid "burning" or damaging turfgrass sod.



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- G. Establishment period shall extend until final acceptance by the Owner according to the conditions of the Contract.

#### 3.04 CLEANING

- A. Immediately clean spills from paved and finished surface areas.
- B. Remove debris and excess materials from project site.
- C. Dispose of protective barricades and warning signs at termination of lawn establishments.

END OF SECTION

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## SECTION 02450

## TREE AND PLANT PROTECTION

## PART 1 - GENERAL

## 1.01 DESCRIPTION

- A. Provide all equipment and materials, and do all work necessary to protect existing trees and plants from damage as a result of the contractor's operations.

## 1.02 RELATED SECTIONS

- A. Section 02210 – Finish Grading
- B. Section 02420 – Soil Preparation and Soil Mixes
- C. Section 02430 – Sodding
- D. Other Sections as applicable.

## 1.03 REFERENCED STANDARDS

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
  - 1. International Society of Arboriculture (ISA): Guide for Establishing Values of Trees and Other Plants

## 1.04 SUBMITTALS

- A. Proposed methods, materials to be employed, and schedule for effecting tree and plant protection shall be submitted for approval.

## 1.05 DAMAGE PENALTIES

- A. If any trees or shrubs are damaged, and replacement is required, a number and diameter of trees or shrubs of the same species and variety, as specified by the Owner, shall be furnished and planted by the Contractor. The total inch diameter of the replacement trees or shrubs shall equal the diameter of the tree or shrub to be replaced. The Contractor shall not be liable for any loss or damage which occurs while the Contractor is complying with instructions given by the Owner.

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## PART 2 - PRODUCTS

### 2.01 TREE PROTECTION FENCING

- A. Tree protection fencing shall be mesh fence, 6 ft. high minimum, with 4"x4"x6' pressure treated wood posts.
- B. Posts shall be spaced 10 ft. O/C (max)
- C. Fencing other than that specified above shall be subject to the approval of the Engineer.

## PART 3 - EXECUTION

### 3.01 INSTALLATION OF FENCING

- A. Prior to the start of demolition work and clearing and grubbing operations, tree protection fencing shall be installed in accordance with the following:
  - 1. Fencing shall be installed at the tree protection areas as directed by the Engineer or Owner.
  - 2. Fencing shall be located along the cut and fill lines staked by the project surveyor and approved by the Landscape Architect or Owner.

### 3.02 ROOT PRUNING

- A. Prune minimum necessary to remove injured twigs and branches, deadwood, and suckers. Pruning shall be done with regard to natural form of plant material or as directed by the Engineer or Owner.
- B. Do not prune prior to delivery to site.
- C. All cuts one inch diameter or larger made during pruning of any plant material shall be painted with commercial grade sealant as approved and directed by Owner.
- D. Pruning cuts shall be monitored to ensure proper healing and to prevent insect/disease infestation.
- E. Landscape Contractor shall perform all specialized shearing and or pruning as directed by the Owner and as shown on the drawings at no additional cost to the Owner.

### 3.03 CLEARING WITHIN PROTECTION AREAS

- A. Elective clearing within tree protection areas shall only be performed when and as directed by the Owner.

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## 3.04 REMOVAL OF PROTECTION

- A. Except as otherwise indicated or requested by Owner, temporary protection devices and facilities installed during course of the work shall be removed only after all work which may injure or damage trees and plants is completed.

END OF SECTION

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## SECTION 16000

## ELECTRICAL GENERAL REQUIREMENTS

## PART 1 - GENERAL

## 1.01 SCOPE

- A. Provide all labor, materials, tools, supplies, equipment, and temporary utilities to complete the work shown on the Drawings and specified herein for lighting and power systems. All systems are to be completely installed and fully operational. Specifically, the work includes, but is not limited to:
1. Electric services, secondary feeders, branch circuits, contactors, all connections to controls, and equipment
  2. Installation of underground conduits and splices
  3. Complete lighting systems
  4. Complete grounding system including system and equipment

## 1.02 RELATED DOCUMENTS

- A. The general provisions of the Contract, including General Conditions and Special Conditions, apply to all the work specified herein.

## 1.03 LAWS, PERMITS, FEES AND NOTICES

- A. Secure and pay all permits, fees, and licenses necessary for the proper execution and completion of the work. Submit all notices and comply with all laws, ordinances, rules and regulations of any public agency bearing on the work. Contractor shall be a licensed electrical contractor in the county of construction.

## 1.04 DEPARTURES

- A. If any departures from the Contract Drawings of Specifications are deemed necessary, details of such departures and the reasons therefore shall be submitted as soon as practicable to the ENGINEER for advance written approval.

## 1.05 BASIS FOR WIRING DESIGNS

- A. The Contract Drawings and Specifications describe specific sizes of switches, breakers, fuses, conduits, conductors, motor starters and other items of wiring equipment. These sizes are based on specific items of power consuming equipment (heaters, lights, motors for fans, compressors, pumps, etc.). Wherever another trade provides power consuming equipment that differs from the Drawings and Specifications, the wiring for such equipment shall be changed to proper sizes to match at no additional expense to the OWNER.

## 1.06 AS-BUILT INFORMATION

- A. A set of "red-lined" electrical drawings shall be carefully maintained at the job site. Actual conditions are to be put on the drawings in red on a daily basis, so the drawings will continuously show locations and routings of cables, conduits, pull

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boxes, circuit numbers, and other information required by the ENGINEER.

#### 1.07 EXCAVATING FOR ELECTRICAL WORK

- A. General – Excavation or drilling, backfill and repair of paving and grassing shall be in the bid of the electrical contractor. The actual work need not be performed by electrical trades. However, the electrical contractor is responsible for all excavation, drilling, dewatering, backfilling, tamping, and repair of pavements and grassing required in support of electrical work. All areas disturbed by electrical work shall be repaired to their original condition, or as indicated on the drawings.
- B. Coordination
  - 1. The electrical contractor must check for existing utilities before commencing any excavation or drilling.
  - 2. Contract drawings and other trades are to be consulted to avoid interferences with other utilities on this project.
  - 3. In the event of damage to existing utilities, the OWNER and ENGINEER shall be immediately notified, and damage shall be immediately repaired.
- C. Precautions – The electrical contractor must take every reasonable precaution to avoid interferences. In the vicinity of a suspected interference, excavations shall be dug by hand.

#### 1.08 JOB SITE VISIT

- A. Visit the project site before submitting a bid. Verify all dimensions shown on the Contract Drawings and determine the characteristics of existing facilities which will affect performance of the work, but which are not shown on the Drawings or described within these Specifications.

#### 1.09 CODES AND STANDARDS

- A. Applicable provisions of the following codes and standards, and other codes and standards required by the State of Florida and local jurisdictions, are hereby imposed on a general basis for electrical work (in addition to specific applications specified by individual work sections of these specifications).
  - 1. U.L. – Electrical materials shall be approved by the Underwriters' Laboratories, Inc. This applies to materials which are covered by U.L. standards.
  - 2. NEC – National Electrical Code (NFPA-70-2014)
  - 3. OSHA – Standards of the Occupational Safety and Health Administration are to be complied with.
  - 4. NEMA – National Electrical Manufacturers Association Standards are to be met wherever standards have been established by that agency, and proof is specifically required with material submittals for switchboards, motor control centers, panelboards, cable trays, motors, switches, circuit breakers, and fuses.
  - 5. ANSI – American National Standards Institute
  - 6. Florida Building Code

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**1.10 ELECTRICAL SUBMITTALS**

- A. The CONTRACTOR shall submit shop drawings, samples and certificates in accordance with the Special Conditions for additional instructions on substitutions. Submittals will not be accepted for partial systems. Submit all materials for each specifications section at one time. Submittals must be arranged, correlated, indexed and bound in orderly sets for ease of review.
- B. Shop drawings and manufacturer's data sheets are required for all electrical materials. Samples are to be supplied for any substitute as requested by the ENGINEER.
- C. Submit Shop Drawings, manufacturer's data, and certifications on all items of electrical work prior to the time such equipment and materials are to be ordered. Order no equipment or materials without approval from the ENGINEER.

**1.11 OPERATION AND MAINTENANCE MANUALS**

- A. The CONTRACTOR shall submit Operation and Maintenance (O&M) Manuals in accordance with Division 1, General Requirements. O&M Manuals must contain, but are not limited to, the following:
  - 1. Brief description of system and basic features
  - 2. Manufacturer's name and model numbers of all components of the system
  - 3. List of local factory authorized service companies
  - 4. Operating instructions, including preparation for starting up, seasonal changes, shut down and service
  - 5. Maintenance instruction
  - 6. Possible breakdowns and repairs
  - 7. Manufacturer's literature describing each piece of equipment
  - 8. Control diagrams by the control manufacturer
  - 9. Description of sequence by the control manufacturer
  - 10. Parts list
  - 11. Wiring diagrams

**1.12 SPARE PARTS**

- A. Submit in accordance with Division 1, General Requirements, a list of Recommended Spare Parts for all major items of equipment. Include descriptions of each part, part number, and cost.

**1.13 PROJECT DOCUMENTS**

- A. For "As Built" drawing requirements, see Division 1.
- B. In addition, each "As Built" single line diagram shall be framed under glass and mounted on wall near respective contactors and controls.

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**PART 2 - PRODUCTS****2.01 GENERAL**

- A. Electrical Temporary Facilities – The CONTRACTOR shall include in his bid the cost of furnishing, installing and maintaining all materials and equipment required to provide temporary light and power to perform the work of all trades during construction and until work is completed. Adequate lighting and receptacle outlets for operation of hand tools shall be provided throughout the project, including shanties, trailers, field offices, temporary toilet enclosures, and shall be extended as construction progresses.
- B. All reasonable safety requirements shall be observed to protect workers and the public from shock and fire hazards.
  - 1. Ground fault interrupters shall be employed in accordance with Codes.
  - 2. Ground wires are required in all circuits. Ground poles are required on all outlets. All metallic cases shall be grounded.
  - 3. Rain-tight cabinets shall be used for all equipment employed in wet areas.

**2.02 ELECTRICAL PRODUCTS**

- A. Unless otherwise indicated in writing by the ENGINEER, the products to be furnished under this specification shall be the manufacturer's latest design. Where two or more units of the same class of equipment are required, these units shall be products of the same purpose and rating shall be interchangeable throughout the project.
- B. All products shall be newly manufactured. Defective equipment or equipment damaged in the course of the installation or a test shall be replaced or repaired in a manner meeting the approval of the ENGINEER, at no additional expense to the OWNER.

**2.03 SUBSTITUTIONS**

- A. Comply with instruction in the Contract General Conditions and Special Conditions regarding substitutions.

**2.04 ELECTRICAL IDENTIFICATION**

- A. Color Coding – Conductor colors shall be in accordance with NEC and NEMA requirements. Refer also to applicable sections of these specifications. Three-phase feeder and branch circuits shall be identified as follows:



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<b>120 / 240</b>	<b>277 / 480</b>
A – Black	A – Brown
B – Red	B – Orange
C – Blue	C – Yellow
N - White	N – Gray
Green or bare for grounding conductors	
Green with Yellow trace for Special Grounding	

**2.05 NAMEPLATE**

- A. The following items shall be equipped with nameplates – All motors, motor starters, motor control centers, pushbutton stations, control panels, time switches, disconnect or relays in separate enclosures, transformers, receptacles, wall switches, high voltage boxes, and cabinets. All light switches and outlets shall carry a phenolic plate with the supply circuit number. Electrical systems shall be identified at junction and pull boxes, terminal cabinets and equipment racks.
- B. Nameplates shall adequately describe the function of the particular equipment involved. Nameplates for panelboards and switchboards shall include the panel designation, voltage and phase of the supply. For example, "Panel A, 277 / 480 V, 3-phase, 4-wire." The name of the machine on the motor nameplates for a particular machine shall be the same as the one used on all motor starters, disconnect and P.B. station nameplates for that machine. Nameplates shall be laminated phenolic plastic, white front and back with black core, with lettering etched through the outer covering; black engraved letters on white background. Lettering shall be 3/16 inch high at pushbutton stations, thermal overload switches, receptacles, wall switches and similar devices, where the nameplate is attached to the device plate. At all other locations, lettering shall be 1/4 inch high, unless otherwise detailed on the drawings. Nameplates shall be securely fastened to the equipment with No. 4 Phillips, rough-head, cadmium-plated, steel self-tapping screws or nickel-plated brass bolts. Motor nameplates may be nonferrous metal not less than 0.03 inch thick, die stamped. In lieu of separate plastic nameplates, engraving directly on device plates is acceptable. Engraved lettering shall be filled with contrasting enamel. Equipment nameplate schedule for all equipment shall be submitted with shop drawing submittal for ENGINEER's approval.
- C. All junction and splice boxes shall be labeled using permanent shipping tags attached to boxes, not covers.

**2.06 WIRE AND CABLE IDENTIFICATION**

- A. All wire and cable shall be identified at each termination point and at each pull box, splice box, junction box, or manhole. Provide permanent, waterproof, non-metallic (paper unacceptable) tags indicating the circuit number in 3/16 inch letters. Circuit numbers shall be protected with clear shrinkable tubing.

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**PART 3 - EXECUTION****3.01 DELIVERY, STORAGE AND HANDLING**

- A. Deliver products to project properly identified with names, model numbers, types, grades, compliance labels and similar information needed for distinct identification; adequately packaged or protected to prevent deterioration during shipment, storage and handling. Store in a dry, well ventilated, indoor space, except where prepared and protected by the manufacturer specifically for exterior storage. Comply with OWNER's instruction for storage locations.

**3.02 ELECTRICAL COORDINATION**

- A. The CONTRACTOR is responsible for coordination with the OWNER, ENGINEER, the power company, and the telephone company on all matters that have a bearing on the electrical work.
- B. The Drawings indicate the extent, the general location, and arrangement of equipment, conduit, and wiring. Study the Drawings, including details, so the equipment shall be properly located and readily accessible. Locate all electrical equipment to avoid interference with mechanical and / or structural features. Make necessary changes in spacings and locations of lighting fixtures, panelboards, cabinets, receptacles and other items of equipment provided that the overall patterns of layouts are not disrupted and remain uniform.

**3.03 CUTTING AND PATCHING**

- A. Cut and prepare all openings, chases, and trenches required for the installation of equipment and materials. Repair, remodel, and refinish in strict conformance with the quality of workmanship and materials in the surroundings. Obtain written permission from the ENGINEER for any alterations to structural members before proceeding. All penetrations through fire walls or floor / ceiling slabs shall be sealed to maintain the fire integrity of the wall or slab.

**3.04 MAINTENANCE**

- A. Render all necessary measures to insure complete protection and maintenance of all systems, materials, and equipment prior to final acceptance. Any materials or equipment not properly maintained or protected to assure a "factory new" condition at the time of final acceptance shall be replaced immediately at no additional cost to the OWNER.

**3.05 WATERPROOFING**

- A. Whenever any work penetrates any waterproof area, seal and render the work waterproof. All work shall be accomplished so as not to void or diminish any waterproofing bond or guarantee.

**3.06 TESTS**

- A. Conduct an operating test of equipment prior to the ENGINEER's approval. The equipment shall be demonstrated to operate in accordance with the requirements of these Specifications. The tests shall be performed in the presence of the ENGINEER or an authorized representative. The CONTRACTOR shall furnish all instruments, electricity and personnel required for the tests.

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## 3.07 CLEANUP

- A. Maintain continuous cleanup during the progress of the work, and use appointed storage areas for supplies. The premises shall be kept free from accumulations of waste materials and rubbish.

END OF SECTION

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## SECTION 16011

## CODES &amp; STANDARDS

## PART 1 - GENERAL

1.01 THIS SECTION COVERS THE CODES, SPECIFICATIONS AND STANDARDS CONSIDERED MINIMUM REQUIREMENTS FOR MATERIALS, WORKMANSHIP AND SAFETY FOR ALL DIVISIONS 16 AND RELATED ELECTRICAL WORK.

1.02 SPECIFICATIONS, CODES AND STANDARDS

- A. Reference within this Specification to standards, codes or reference specifications implies that any item, product or material so identified must comply with all minimum requirements as stated therein, except packaging and shipping, unless indicated otherwise. Only the latest revised editions are applicable.

Some of the references used in this Division are as follows:

NFPA	National Fire Protective Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
U.L.	Underwriters' Laboratories, Inc.
ANSI	American National Standards Institute
FS	Federal Specification

- B. The Specifications, codes and standards indicated below and in other Sections, including the current addenda, amendments and errata, referred to by basic designation only, form a part of this specification.

NFPA-70	National Electrical Code (Current Edition)
NFPA-90A	Air Conditioning & Ventilation (Current Edition)
NFPA-101	Code for Safety to Life (Current Edition)
F.B.C.	Florida Building Code (Current Edition)

1.03 UNDERWRITERS' LABORATORIES

- A. Where materials and equipment are available under the continuing inspection and labeling service of U.L.; provide such material and equipment.
- B. Listing by Underwriters' Laboratories shall be evidenced by the label or:
- U.L. - Electrical Construction Materials List (Green Book)
  - U.L. - Electrical Appliance & Utilization Equipment List
  - U.L. - Building Materials List

## PART 2 - PRODUCTS - NOT USED

## PART 3 - EXECUTION - NOT USED

END OF SECTION

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## SECTION 16050

## BASIC ELECTRICAL MATERIALS AND METHODS

## PART 1 - GENERAL

## 1.01 SCOPE

- A. Provide all material as required for a complete project as required by the Drawings and in this Specification.

## 1.02 SHOP DRAWING SUBMITTALS

- A. Submit shop drawings for the following:

All raceways  
Wiring and Splices  
Contactors, Relays, Photocells  
Poles and Fixtures

## PART 2 - PRODUCTS

## 2.01 RACEWAY

- A. Galvanized Rigid Conduit (ANSI C80.0) – Rigid galvanized steel conduit "RGS" shall be U.L. Approved, Schedule 40, mild steel pipe, zinc-coated on the inside and outside. Fittings shall be zinc-coated, U.L. Approved.
- B. PVC Conduit – Underground PVC conduit shall be Schedule 40 or Schedule 80 unless otherwise noted, and shall be U.L. approved. PVC conduit shall be Schedule 80 when installed above ground.
- C. Locations: – Conduit shall be used as follows:
  - 1. All above ground grade exposed conduits shall be hot dipped galvanized rigid steel except otherwise noted on the Drawings.
  - 2. All conduits penetrating rated fire walls or rated fire floors shall be installed with U.L. Approved devices to maintain the fire rating of the wall or floor penetrated.

## 2.02 WIRE AND CONNECTORS

- A. Cable shall be rated for 600 volts and shall meet the requirements below:
  - 1. Conductors shall be stranded.
  - 2. All wire shall be brought to the job in unbroken packages and shall bear the date of manufacturing; not older than 12 months.
  - 3. Type of wire shall be THWN or THHN rated 75 degrees C, suitable for wet locations except where otherwise required by the drawings.

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4. No wire smaller than No. 12 AWG shall be used unless specifically indicated.
5. Conductor metal shall be copper.
6. All conductors shall be meggered after installation and insulation must be in compliance with the Insulated Power Cable Engineers Association Minimum Values of Insulation Resistance.

## 2.03 BOXES

- A. Boxes for wiring devices (switches and receptacles) installed outdoors or wet locations shall be weatherproof fiberglass with polycarbonate cover plates. Junction boxes shall be NEMA 4X construction. All boxes shall be securely mounted, plumb and level, in readily accessible locations.
- B. Pull boxes in ground shall be Pencil HHPL 172012 or approved equal with lid marked "ELECTRIC".

## 2.04 GROUNDING

- A. Grounding and Bonding – All Grounding and Bonding shall be in accordance with NFPA 70. Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in raceways, and neutral conductor of wiring systems.
- B. Grounding Conductor – Provide an insulated, green-colored equipment grounding conductor in all feeder and branch circuits. This conductor shall be separate from the electrical system neutral conductor. Conduits will not be approved as grounding conductor.
- C. The CONTRACTOR shall install all ground rods, ground wires, and connectors as required for the complete grounding system.
- D. All metal parts and grounding conductors in each manhole or pullbox shall be grounded to a local ground rod.
- E. Resistance – Readings shall not be taken within 48 hours of a rainfall.
- F. The CONTRACTOR shall provide a written report for all grounding test results to the ENGINEER. The test shall include all ground connections. The report shall be signed by the OWNER of the contracting firm and shall include: test date, time, weather conditions on test date, weather conditions 3 days prior to the test date, location, and results.
- G. All raceways require grounding conductors; metallic raceways are not adequate grounding paths. Bonding conductors through the raceway systems shall be continuous from main switch ground buses to panel ground bars of panelboards, and from panel grounding bars of panelboards, and motor control centers to branch circuit outlets, motors, lights, etc. These ground conductors are required throughout the project regardless of whether conduit runs or the Cable and Conduit Schedule show ground conductors on the Drawings.

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- H. All connections made below grade shall be of the exothermic type.

### PART 3 - EXECUTION

#### 3.01 CONDUIT INSTALLATION

##### A. General

1. Nylon pull cords shall be installed in all empty conduits. Wire shall not be installed until all work of any nature that may cause damage is completed, including pouring of concrete. Mechanical means shall not be used in pulling in wires 8 AWG or smaller.
2. The use of running threads is prohibited and where some such device is necessary, split couplings, Erickson couplings, or equal shall be used. Where water-tight conduit installations are required, water-tight conduit unions shall be used.
3. All conduits shall be cleaned by pulling a brush swab through before installing cables.
4. All conduits shall be sealed at each end with electrical putty or Duct Seal. Special care shall be taken at all equipment where entrance of moisture could be detrimental to equipment.

##### B. Handling

1. Conduits subjected to rough handling or usage shall be removed from the premises.
2. Conduits must be kept dry and free of water or debris with approved pipe plugs or caps. Care shall be given that plugs or caps are installed before pouring of concrete. All spare conduits shall remain plugged or capped upon project completion.

##### C. Concrete and Masonry

1. Where conduits pass through exterior concrete walls or fittings below grade, the entrances shall be made watertight. This shall be done by providing pipe sleeves in the concrete with 1/2" minimum clearance around the conduits, and caulking with askum and sealant, or by means of conduit entrance seals.
2. Where embedded conduits cross expansion joints, furnish and install offset expansion joints or sliding expansion joints. Sliding expansion joints shall be made with straps and clamps.

##### D. Panelboards and Boxes

1. Conduits entering panelboards, pull boxes, or outlet boxes shall be secured in place by galvanized locknuts and bushings, one locknut outside and one locknut inside of box with bushing on conduit end. The locknuts shall be tightened against the box without deforming the box. Bushings shall be of the insulating type.



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## E. Bending

1. Field conduit bends shall be made with standard tools and equipment manufactured especially for conduit bending.

## F. Mounting and Concealing

1. Conduit runs shall always be concealed in finished spaces and may be exposed in industrial spaces except where indicated on the Drawings.
2. Exposed runs of conduits shall be installed with runs parallel or perpendicular to walls, structural members or intersections of vertical planes and ceilings, with right angle turns consisting of symmetrical bends or pull boxes as indicated on the Drawings. Bends and offsets shall be avoided where possible.
3. Where conduits are run individually, they shall be supported by approved pipe straps, secured by means of: 1) toggle bolts or hollow masonry; 2) expansion shields and machine screws or standard preset inserts on concrete or solid masonry; 3) machine screws or bolts on metal surfaces, and wood screws on wood construction. The use of perforated straps or wires will not be permitted.
4. Concrete inserts and pipe straps installed shall be stainless steel unless otherwise noted on the Drawings. All bolts, nuts, washers, and screws shall be stainless steel. Individual hangers, trapeze hanger, and rods shall be prime-coated and painted. Conduit support clamps shall be the two-piece type.
5. Conduit support struts, clamps, bolts, nuts and washers installed outdoors and in corrosive atmosphere indoors or on floors shall be stainless steel.
6. In furred ceilings, conduit runs shall be supported from structure, not furring.

## 3.02 TERMINATIONS AND SPLICES

- A. Terminations of power cable shall be by means of U.L. approved connectors. All connectors shall meet U.L. 486B and shall be compatible with the conductor material.
- B. Splicing of power, control, or instrumentation wiring will not be allowed except by written approval of the ENGINEER. Where splicing is allowed, splices shall be made waterproof regardless of location.

## 3.03 GROUNDING

- A. General – Grounding shall be as indicated, and as required by NFPA 70 and ANSI-C2.
- B. Grounding Connections – Grounding connections which are buried or otherwise normally inaccessible, and excepting specifically those connections for which access for periodic testing is required, shall be made by exothermic weld. Exothermic welds shall be made strictly in accordance with the weld manufacturer's written recommendations. Welds which have "puffed up" or which show convex surfaces,

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indicating improper cleaning, are not acceptable. No mechanical connector is required at exothermic weldments.

- C. Grounding Grid System – Conductors shall be buried a minimum of 24 inches in the ground. All cable crossings shall be securely bonded and the system connected to the ground system as well as to all equipment and structural steel work, and to all water piping.
- D. Grounding Conductors – Conductors shall be insulated copper wire and sized as required by National Electrical Code.

### 3.04 FIELD TESTS

- A. As an exception to requirements that may be stated elsewhere in the Contract, the ENGINEER shall be given five working days notice prior to each test. The CONTRACTOR shall demonstrate that all circuits and devices are in good operating conditions.
- B. Test on 600 volts wiring – Verify all 600 volts wiring has no short circuits or accidental grounds. Perform insulation resistance tests on all wiring using an instrument which applies a voltage of approximately 500 volts to provide a direct reading of resistance. Minimum resistance shall be 1 megohm. The conductor loop resistance of each pair shall also be measured. The mutual capacitance between conductors of each pair shall also be measured. Provide written results for approval.

### 3.05 WIRE AND CABLE INSTALLATION

- A. Conductors shall not be pulled into raceway until:
  - 1. Raceway system has been inspected and approved by the ENGINEER.
  - 2. Plastering and concrete have been completed in affected areas.
  - 3. Raceway system has been freed of moisture and debris.
- B. Conductors of No. 8 size and smaller shall be hand pulled. Larger conductors may be installed using power winches. Wire pulling lubricant, where needed, shall be U.L. approved. Wire in panels, cabinets, and gutter shall be neatly grouped, using nylon tie straps, and fanned out to terminals.
- C. Building wire conductors THHN / THWN installed below grade, or in concrete slabs on grade, shall have type RHW-USE insulation, 600 volts. Building wire shall be stranded.
- D. Each cable or wire in panels, pull boxes, manholes, or troughs shall have a permanent identification, with numbers and letters indicated on the conduit and cable schedule. For underground cable identification tag, see drawing.
- E. Lubricants – Lubricants for assisting in the pulling of cables shall be those specifically recommended by the cable manufacturer. The lubricant shall not be deleterious to the cable sheath, jacket, or outer coverings, and shall be U.L.

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approved. Use Polywater J or equal.

- F. Cable Pulling Tensions – Shall not exceed the maximum pulling tension recommended by the cable manufacturer.

### 3.06 MOUNTING AND SUPPORTING ELECTRIC EQUIPMENT

- A. Furnish and install all supports, hangers, and inserts required to mount fixtures, conduits, cables, pull boxes, and other equipment furnished under this section or furnished for installation under this section.
- B. All items shall be supported from the structural portion of the building and studs, except standard ceiling-mounted lighting fixtures and small devices, that may be supported from ceiling system where permitted by the ENGINEER. However, no sagging of the ceiling will be permitted. Supports and hangers shall be of types approved by Underwriter's Laboratories.
- C. Perforated straps and wire are not permitted for supporting electrical devices. Anchors shall be of approved types.
- D. All supports, hangers, hardware, etc. used outdoors, shall be stainless steel and in corrosive atmosphere, or in hazardous areas shall be nonferrous, corrosion resistant, or stainless steel. Supports shall be selected to avoid galvanic reactions. Support devices shall be submitted for approval.

### 3.07 UNDERGROUND WORK

- A. **Excavation for Electrical Work**  
Excavation or drilling, backfill and repair of paving and grassing is to be in the bid of the electrical contractor. The actual work need not be performed by electrical trades. However, the electrical contractor is responsible for all excavation, drilling, dewatering, backfilling, tamping, and repair of pavements and grassing required in support of electrical work. All areas disturbed by electrical work shall be repaired to their original conditions, or as indicated on the Drawings.
- B. **Coordination**  
The electrical contractor must check for existing utilities before commencing any excavation or drilling. Contract Drawings and other trades are to be consulted to avoid interference with other utilities on this project. In the event of damage to existing utilities, the OWNER and ENGINEER shall be immediately notified, and the damage shall be immediately repaired at no cost to the Owner.
- C. **Precautions**  
The electrical contractor must take every reasonable precaution to avoid interferences. In the vicinity of a suspected interference, excavations shall be dug by hand.
- D. **Excavating, Drilling and Backfilling**
1. Materials for backfill shall be as specified in Specification 02222 - Excavation and Backfill for Utility Systems, Section 2.02.

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2. Locate and protect existing utilities and other underground work in a manner which will insure that no damage or service interruption will result from excavating and backfilling.
3. Protect property from damage which might result from excavating and backfilling.
4. Protect persons from injury at excavations, by shoring up, and using barricades, warnings and illumination.
5. Coordinate excavations with weather conditions, to minimize the possibility of washouts, settlements, and other damages and hazards.
6. Dewater excavations as necessary. Protect excavations from inflow of surface water. Pump minor inflow of ground water from excavations; protect excavations from major inflow of ground water by installing temporary sheeting and waterproofing. Provide adequate barriers which will protect other excavations and below grade property from being damaged by water, sediment, or erosion from or through the electrical work excavations.
7. No organic material is permitted in backfill. All vegetation, peat, sod or other organic matter shall be removed from the premises.
8. Except under roadways, backfill material shall be clean sand or shell rock. No debris or trash may be used as backfill.
9. Under roadways, backfill material shall be the same as comprising the road bed.
10. Backfill excavations using 8-inch high courses of backfill material, uniformly compacted to 95 percent density per ASTM Standard D1557, using power-driven, hand-operated compaction equipment. Watering the backfill for compaction is not an acceptable method.
11. Backfill to elevations matching adjacent grades. Where subsidence is measurable or observable at electrical work excavations during the warranty period, remove the surface (pavement, lawn or other finish) add backfill material, compact, and replace the surface treatment. Restore the appearance, quality, and condition of the surface or finish to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.
12. Where excavation and backfill for electrical work passes through or occurs in a landscaped area, repair or replace the landscape work to match the original condition and quality of work.
13. Where excavation and backfill for electrical work passes through or occurs in an area of paving or flooring, replace and restore the construction and finish of the paving or flooring to match the original condition and quality of the work.

## E. Underground

1. Underground conduits not under concrete slabs, shall be buried at least two feet below finished grade for circuits rated 600 volts or less. Where steel conduit penetrates ground or concrete, the conduit shall be painted with

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two coats of asphaltic base paint one foot on each side of penetration.

2. Transition from PVC to RGS shall be made prior to elbow below grade. Paint RGS with bitumastic, 12 inches above and below grade.

### 3.08 CONCRETE MANHOLES AND PULL BOXES

- A. Provide precast concrete manholes and pull boxes as indicated on the drawings. Manholes and pull boxes shall be installed on firmly compacted ground level and plumb at the elevations indicated on the drawings. Manholes and pull boxes shall be equipped with pulling-in irons opposite and below each ductway entrance. Manholes and pull boxes shall have cable supports so that each cable is supported at a minimum of 3 foot intervals within the manhole or pull box. Cable supports shall be fastened with galvanized bolts and shall be fabricated of fiberglass or galvanized steel.

Make provision for drainage and grounding. Install grounding rods at each manhole.

- B. Traffic Covers – H-2-044 traffic rated covers shall be provided for manholes and pull boxes with identification as follows:

ELECTRIC" where voltages within are 600 volts and less.

"SIGNAL" for instrumentation, telephone, and control.

- C. Covers and frames shall be cast iron or hot dip galvanized.

End bells shall be cast in boxes by precast manhole manufacturer for all conduit entrances indicated on the drawings.

- D. Every manhole shall be equipped with 24" x 24" concrete knockouts for future conduit installation on two opposing walls.

### 3.09 CONDUIT INSTALLATION

- A. General – Conduits in structural slabs shall be placed between the upper and the lower layers of reinforcing steel, requiring careful bending of conduits. Conduits embedded in concrete slabs shall be spaced not less than eight inches on centers or as widely spaced as possible where they converge at panels or junction boxes. Conduits running parallel to slab supports, such as beams, columns and structural walls, shall be installed not less than 12 inches from such supporting elements. To prevent displacement during concrete pour, saddle supports for conduit, outlet boxes, junction boxes, inserts, etc., shall be secured.

### 3.10 WIRE AND CABLE INSTALLATION

- A. Installation of Cables in Manholes, Handholes, and Vaults. Do not install cables utilizing the shortest route, but route along those walls providing the longest route and the maximum spare cable lengths. Form all cables to closely parallel walls, not to interfere with duct entrances, and support on brackets and cable insulators. In existing manholes, handholes and vaults where new ducts are to be terminated, or where new cables are to be installed, the existing installation of cables, cable supports, and grounding shall be modified as required for a neat and workmanlike

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installation, with all cables properly arranged and supported. Support cable splices in underground structures by racks on each side of the splice. If splicing is approved, locate splices to prevent cyclic bending in the spliced sheath and out of the water. Install cables at middle and bottom of cable racks, leaving top space opening for future cables, except as otherwise indicated. Provide one spare three-insulator rack arm for each cable rack in each underground structure.

- B. Cable Markers (or tags) in Manholes and Handholes – Provide cable markers or tags for each cable or wire passing through or leaving manholes or handholes and at each terminal. Tags shall be stainless steel, bronze, lead strap, or copper strip, approximately 1/16 inch thick, or hard plastic 1/8 inch thick, suitable for immersion in salt water, and of sufficient length for imprinting the legend on one line, using raised letters not less than 1/4 inch in size, and shall be permanently marked or stamped with the identification as indicated. Use of two color laminated plastic is acceptable. Plastic markers shall be dark in color, and markings shall be light in color to provide contrast so that identification can be easily read. Fastening material shall be of a type that will not deteriorate when exposed to water with a high saline content.
- C. All supports, hangers, hardware, etc. used outdoors, shall be stainless steel. In corrosive atmosphere, or in hazardous areas, shall be non-ferrous, corrosion resistant, or stainless steel. Supports shall be selected to avoid galvanic reactions. Support devices shall be submitted for approval.
- D. Spare conduits shall be on top or accessible sides and identified uniquely at each location and active conduits shall be located on the bottom unless noted otherwise.

END OF SECTION

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## SECTION 16110

## RACEWAY AND BOXES

## PART 1 - GENERAL

## 1.01 SCOPE

- A. This Section includes basic materials and electrical methods for all of Division 16, Electrical and Related Work.

## PART 2 - PRODUCTS

## 2.01 RACEWAYS AND FITTINGS

- A. Rigid Metal Conduit – Hot-dipped galvanized heavy wall rigid steel conduit shall be used on all electrical and instrumentation systems. Conduit shall conform to Federal Specification WW-C-581d and fittings shall conform to Federal Specification W-F-408, Type I and III, Class 1, Style 2.
- B. Liquid Tight Flexible Metal Conduit – Flexible metal conduit shall be used on all electrical and instrumentation systems. Liquid tight flexible conduit shall conform to NEC Article 351 as manufactured by Appleton, Robroy, or Anaconda. Fittings shall be as manufactured by Midwest or Robroy and conform to Federal Specification W-F-406b, Type I, Class 3.
- C. Rigid Non-Metallic Conduit – Polyvinyl chloride (PVC) conduit, boxes and fittings shall conform to NEMA TC-2 and to Military Specifications MIL-C-23571 for Type II, Schedule 40 and shall be used on specified grounding and utility company systems only.
- D. Wireways and Auxiliary Gutters – Wireways and auxiliary gutters shall be galvanized steel with removable covers unless indicated as hinged. Components shall be as manufactured by Square 'D', Hoffman, Keystone, or General Electric. All wireways shall be without manufactured knockouts.

## 2.02 BOXES AND ACCESSORIES

- A. Sheet steel boxes and accessories shall conform to Federal Specification W-J-800c, as manufactured by Appleton, Steel City, or Raco.
- B. Cast metal ferrous outlets shall conform to Federal Specification W-C-568a, as manufactured by Appleton, Pyle-National, or Crouse-Hinds.
- C. Pull boxes and junction boxes larger than 4-11/16" shall be constructed of galvanized steel in accordance with NFPA 70, Articles #370 and #373. Boxes shall be as manufactured by Hoffman, Boss, or Keystone. All boxes shall be without manufactured knockouts.
- D. Cast, malleable iron outlet boxes shall have threaded conduit entrances and gasketed covers. Aluminum-type is not permitted. Boxes shall have a minimum of two hubs on the bottom, as manufactured by Appleton or Crouse-Hinds.
- E. Concrete pull boxes shall be of the open bottom type, with an iron, locking cover marked "ELECTRIC" or "SIGNAL" as applicable, and shall be U.L. Listed and meet all

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codes.

- F. Rigid Conduit Coupling – Where rigid steel conduit is used, jointing conduit runs shall be connected by a threaded coupling or three piece couplings. Threadless coupling will not be permitted.
- G. Rigid Conduit Bushing – Where rigid steel conduit is used, all terminations in boxes, panels, etc. shall have locknuts on both sides of equipment, with a bonded, grounding bushing.
- H. Field Cut Threads – Field-cut threads must be cleaned with oil and painted with a coat of aluminum, or galvanized paint. Newly cut threads that are not coated will have rust or corrosion develop, and will inhibit the grounding path of the conduit run.
- I. Conduit Nipples – The use of all-thread is prohibited.

### 2.03 EXPANSION FITTINGS

- A. Any expansion fittings used shall be manufactured by O-Z Electrical Manufacturing Company, and specified as follows: Rigid metal conduit - Type AX; Electrical metallic tubing - Type TX.
- B. Miscellaneous – Coatings – Tnemec 46-465

## PART 3 - EXECUTION

### 3.01 RACEWAYS

- A. Use rigid, non-metallic conduit as follows, unless noted otherwise: Grounding systems and utility systems only.
- B. Paint metal conduit in floor slab or in the ground with 2 coats of Tnemec 46-465.
- C. Use liquid tight, flexible metal conduit for all connections to vibrating equipment, such as motors, valves, and devices on piping or ductwork. The maximum length shall be restricted to 18" or less, any longer lengths must have approval. It shall be restricted for use within 24 inches above the floor elevation. (A green bonding conductor will be required in all runs, with other conductors.)
- D. Install exposed conduit parallel with, or at right angles to the building lines. Conduit larger than 1", except as indicated, in reinforced concrete slabs shall be parallel with, or at right angles to the supports of the slab. Conduit in concrete shall be located so as not to affect the structural strength of the slabs. Conceal all conduits in walls, above ceilings, in or under slabs or in furring, except in mechanical and electrical rooms and as indicated.
- E. Route feeders, home runs, and conduits where indicated, except those minor deviations as approved, will be permitted.
- F. All conduits that are embedded in concrete, pass through concrete, or stub-up shall have a 30 mil coating of Tnemec 46-465 over its entire length where embedded in concrete, and 12 inches before entering and 12 inches after exiting the concrete.

### 3.02 BOXES AND ACCESSORIES

- A. Minimum size outlet box shall be 4" square by 1-1/2" deep unless otherwise approved or indicated otherwise.

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- B. Use cast malleable iron boxes for outlets with gasketed covers for all exterior and for all damp locations.

### 3.03 MISCELLANEOUS

- A. Provide approved fire stopping materials at all chases to prevent drafts.
- B. Provide expansion fittings in conduit runs crossing expansion joints in the structure.
- C. Provide Jet Line #232 in all empty conduits.
- D. Rigid Conduit fitting shall be cast, malleable iron, with stamped, galvanized steel, stainless steel screw covers, and gasket for use inside. Outside cast malleable iron galvanized, stainless steel screw and gasket.

END OF SECTION

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## SECTION 16120

## CONDUCTORS

## PART 1 - GENERAL

This Section includes basic materials and methods for all of Division 16, Electrical and Related Work.

## 1.01 APPLICABLE REQUIREMENTS

NEC Article 310 and 400  
F.S.J-C-30  
F.S.W-S-6106

## PART 2 - PRODUCTS

## 2.01 CONDUCTORS

- A. Conductors shall conform to Federal Specification J-C-30 for 600 volts, Types THWN/THHN, or XHHW stranded or as shown on the drawings. Sizes are AWG unless otherwise noted.
- B. Grounding conductors larger than Size 1 AWG shall be soft drawn, bare copper or insulated copper. Control conductors for 100 to 600 volts shall be size 14 AWG copper, stranded, and color coded unless indicated otherwise.
- C. Control conductors for 50 volts and under shall be plastic jacketed thermostat cable, Size 18 AWG single conductor, copper, multi-conductor as required. Fixture wire shall be Type THHN for all through wiring where permitted.

## 2.02 PORTABLE CORDS

- A. Portable cord shall be stranded copper, UL Listed, and resistant to water, acid, and alkalis.
- B. Each cord shall have one green covered conductor that shall be used as a grounding conductor.

## 2.03 SPLICES AND TERMINATIONS

- A. Connections shall comply with Federal Specification W-S-610b. Connectors for temperatures to 105NC shall be Ideal Wing Nut or 3M-Scotchloc.
- B. Tape shall be Scotch 33 or slip-knot grey. Voids shall be filled with rubber tape or Scotchfill.
- C. Terminal boards shall be General Electric, Type CR151, type A2. Lugs for the terminal boards shall be the locking tongue type. Control terminals and motor connections up to size 3 shall be ring tongue type as manufactured by T&B Sta-Kon.
- D. Heat shrink for all splices outdoors. Insulating and sealing of all in-line, cable splices from 16 AWG through 1000 kcmil shall be done in accordance with the instructions provided with the Shrink-Kon heat shrinkable insulators, catalog series HS as manufactured by Thomas & Betts.
- E. The connector insulator must be made of thermally stabilized, homogeneous

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polyolefin having internally applied sealant. It must have Underwriter's Listing (UL48, 90NC, 600V) and be approved for the use. It must be usable without additional covering or adhesive, both indoors and outdoors, in overhead, direct buried, or submersed applications at rated voltage. It must not be adversely affected by moisture, ozone, oils, fuels, mild acids and alkalis, or ultraviolet light. It must be compatible with all commonly used cable jacket materials including rubber, plastic, lead, steel, aluminum, and copper. All conductors larger than #10 shall have Noalox Non-Corrosive Paste applied to wires' ends and terminals before connections are made. This will prevent or retard corrosion.

**PART 3 - EXECUTION****3.01 CONDUCTORS**

- A. Conductors size 10 AWG and smaller shall be copper and have insulation colored for phases A, B, and N respectively as follows for single phase systems: 120/240 volts, black, red, and white.
- B. All-bonding conductors shall have a green covering and shall be the same size as the circuit conductors unless otherwise indicated.
- C. Installation of conductors shall be made only in completed raceway systems and all conductors in any conduit shall be pulled in together.
- D. Use wire pulling compounds or lubricants as listed by Underwriters' Laboratories or talc, graphite, or soapstone.

**3.02 SPLICES AND TERMINATIONS**

- A. Use solder-less terminal lugs on all standard conductors. Use approved solder-less connectors for all splices. Keep splices to a minimum.
- B. Splice all neutrals prior to connection to wiring devices. Splices other than pre-insulated connectors shall be covered neatly with insulation type equivalent in value to the conductor insulation. Use minimum of 2 layers of tape.

**3.03 PHASING AND IDENTIFICATION**

- A. The phase designation of all secondary conductors shall be the same and shall be indicated in or on all 3-phase outlets, transformers, panelboards, and disconnect switches, and they shall be connected with uniform phase sequence.
- B. Control wiring shall have a Brady® label or equal attached, secured with a clear piece of heat shrink tubing over the numbers. The numbers shall be attached 1 inch from each end. Tag each individual conductor or wire with a label stating the terminal designation indicated on schematic diagrams, or given on manufacturer's equipment lists, and at each terminal strip, relay, etc.

**3.04 NUMBER OF CONDUCTORS**

- A. For convenience and simplicity, wire tics are shown only on home runs other than power circuits. The Contractor shall determine the correct combination of wires to be run in all raceways including home runs, branch circuit wiring and switch legs.
- B. A green ground wire must be included in all conduits. Neutral wires shall be determined by the load and proper phasing on multi-wire branch circuits.

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- C. All conductors shall have identification per NEC and local codes.
  - 1. Colored tape for feeder conductors should be secured on the conductor with clear piece of heat shrink tubing.
- D. Conduit fill shall be sized per National Electric Code. All 120 volt circuits shall each have individual neutrals.

### 3.05 TESTING

- A. After wires has been pulled in raceways and before hook-up, wires shall be subject to an insulation test. A Megohmmeter of 500 volts shall be used, and a minimum of 10 megohms will be acceptable. Test shall be witnessed by the ENGINEER. A 48-hour notification must be given before test(s) commence. It is typical that wire was abused during installation, usually due to lack of lubrication. The test will reveal any damage to insulation on wiring.

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## SECTION 16140

## WIRING DEVICES

## PART 1 - GENERAL

## 1.01 RELATED WORK SPECIFIED ELSEWHERE

Basic Materials &amp; Methods

## 1.02 APPLICABLE DOCUMENTS

NEMA WD-1 - Wiring Devices, Non-locking  
NEMA WD-5 - Wiring Devices, locking type  
F.S. W-P-455a - Wall Plates

## PART 2 - PRODUCTS

## 2.01 RECEPTACLES

- A. All receptacles shall be the grounding type and shall conform to applicable portions of NEMA Standards WD-1 and WD-5.

NEMA Configuration - #5-20, duplex, Ivory

P &amp; S #5342-I

Leviton - #5342-I

NEMA Configuration #1050

Hubbell - 7512-G receptacle

Hubbell - 7118 stainless steel plate

## 2.02 PLATES AND COVERS

- A. Wall plates for recessed devices shall conform to Federal Specification W-P-455a and shall be of Ivory color with matching screws unless indicated otherwise, and of the configuration required for the devices installed.

Leviton - 86000 Line, P &amp; S or equal

Surface (raised) covers for 4" square boxes shall be 1/2" deep.

Surface covers shall be as manufactured by Steel City, Appleton or Raco of the configuration required. Cover plates indicated (WP) weatherproof shall be made of Type 302 stainless steel with stainless steel springs, screws and gaskets. Sierra Series "WP" of the configuration required.

## 2.03 ATTACHMENT CAPS AND CONNECTORS

- A. Caps shall be NEMA Standard mates to the receptacles and connectors used and shall be as manufactured by Hubbell. Provide one cap for each receptacle other than the duplex type.
- B. Electrical contractor shall connect all equipment furnished by Owner or other contractors, including caps and cords and materials required to complete the installation.



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PART 3 - EXECUTION

- 3.01 INSTALL PLATES AND COVERS ON ALL OUTLETS. INSTALL ALL DEVICES UNIFORMLY IN EACH AREA. USE 20 AMPERES RECEPTACLES EVERYWHERE.

END OF SECTION

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## SECTION 16160

## PANELBOARDS

## PART 1 - GENERAL

## 1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Basic Materials and Methods
- B. Section 16180 – Circuit Breakers, Switches & Fuses

## 1.02 APPLICABLE DOCUMENTS

- A. NEMA PB-1, 1957 - Panelboards
- B. F.S. W-P-115a - Panelboards
- C. NFPA-70 - Articles 110, 240, 384

## 1.03 SUBMITTALS

- A. Submit Shop Drawings for review on each panelboard indicating cabinet dimensions, component arrangements, characteristics, and sizes.

## PART 2 - PRODUCTS

## 2.01 PANELBOARDS

- A. Panelboards shall conform to Federal Specification W-P=115a, complete with cabinets and locks. Fronts shall be finished to resist corrosion with not less than one priming coat and one pearl gray finishing coat. Components shall be arranged approximately as indicated. Bus shall be copper.
- B. Circuits shall be numbered serially from top to bottom with odd numbers on the left. Adjacent poles of single pole devices shall be of opposite polarity with split-phase bussing.
- C. Provide keys, each of which will operate all the panelboard cabinet locks. Provide a typewritten directory with a transparent protective cover on the inside of the panelboard cover. Panels shall be factory assembled and tested. Circuit breaker panelboards shall be Type I, Class 1, bolt-on type.
- D. Panelboards shall be as manufactured by Square “D”, Siemens, General Electric, or Eaton Corporation.
- E. Panelboard bus shall be copper.

## PART 3 - EXECUTION

## 3.01 GENERAL

Mount all panels with tops at 6' above the floor, except as noted or approved otherwise. Identify all panels and all devices. Nipple all adjacent panels together using minimum 1-1/2" conduit. Clean all debris out of cabinets prior to installing covers.

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END OF SECTION

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## SECTION 16180

## SAFETY SWITCHES, CIRCUIT BREAKERS &amp; FUSES

## PART 1 - GENERAL

## 1.01 RELATED WORK SPECIFIED ELSEWHERE:

Panelboards - Section 16160

## Applicable Documents:

NEMA AB-1 - Molded Case Circuit Breakers  
NEMA IC-1 - Industrial Control  
F.S. W-S-865c - Enclosed Switches  
F.S. W-C-375a - Circuit Breakers  
U.L.-198 - Fuses  
NEMA FU-1 - Fuses

## 1.02 SUBMITTALS:

Submit Shop Drawings for review including catalog cuts showing sizes, types and characteristics of all products.

## PART 2 - PRODUCTS

## 2.01 SAFETY SWITCHES/CIRCUIT BREAKER DISCONNECTS:

- A. Safety switches shall conform to Federal Specifications W-S-865c, heavy duty type HD, fusible or non-fusible, with the poles, ampere, voltage and horsepower ratings indicated and shall have solid neutrals and Class R clips. Lugs shall be U.L. listed for copper-aluminum.
- B. Enclosures for safety switches shall be NEMA-1, general purpose, except that switches indicated (WP) weatherproof, shall be NEMA-3R unless marked NEMA-4. Provide hubs as required for NEMA-3R enclosures with suitable gaskets and bonding means.
- C. Switches and disconnects shall be as manufactured by Square 'D', General Electric, Siemens, or Eaton.
- D. Circuit breaker disconnects may be used in lieu of safety switches providing they comply with the safety switch requirements and are applied within their ratings and a schedule is submitted for approval.

## 2.02 CIRCUIT BREAKERS, MOLDED CASE:

- A. Circuit breakers shall conform to Fed. Spec. W-C-375a and NEMA Standard AB-1 unless indicated otherwise. Circuit breakers shall be of the ampere rating, voltage rating, number of poles and class or interrupting capacity (I.C.) as indicated. Interrupting ratings are given in root mean square (RMS), symmetrical amperes based on NEMA test procedures. Lugs and terminals shall be U.L. listed for copper-aluminum. Accessories shall be 120 volts.
- B. Each circuit breaker shall have a trip unit for each pole with elements providing

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inverse time delay under overload conditions and instantaneous magnetic trip for short circuit protection unless indicated as non-automatic. Trip elements shall operate a common trip bar to open all elements.

## 2.03 FUSES:

- A. Provide rejection fuses for all fusible equipment regardless of which section has furnished such equipment.
- B. Fuses shall be of the ratings shown on the drawings, U.L. listed and shall be Bussman Manufacturing Co., Gould-Shawmut Company, CEFCO or approved equal.
- C. All fuses shall be current limiting and have an interrupting capacity of at least 200,000 amperes RMS symmetrical.
- D. The time-current characteristics and ratings shall be such that positive selective coordination is assured.
- E. Fuses, 600 amperes and lower, where applied to general feeder and branch circuit protection, shall conform to U.L. Class RK-1 standards and be Bussmann Type LPN-RK-SP LPS-RK-SP, "Low Peak". Gould-Shawmut dual element "Amp-Trap."
- F. Fuses, where required for circuit breaker protection shall conform to U.L. Class RK-1 standards and be Bussmann Type LPN-RK-SP or LPS-RK-SP "Low Peak", or Gould-Shawmut Class RK1 "Amp-Trap."
- G. Coordination and current limitations or the protection of each part of the electrical system must be designed around the type and class and manufacturer selected for that type and class.

## PART 3 - EXECUTION

## 3.01 INSTALLATION:

- A. Mount grouped switches, disconnects and controls on backboards or unistrut. Provide labels on or in all fusible equipment indicating the type and size replacement fuse required.
- B. Generally, mount switches and disconnects between 4' and 5' A.F.F., readily accessible. Always adhere to minimum height requirements as per riser diagram on plans.

## 3.02 FUSES:

- A. Install all fuses as required where indicated on the drawings and where required by the National Electrical Code, special attention shall be given to air conditioning equipment.
- B. Provide 10% spares (minimum of three) of each size and type of fuses furnished. Spare fuses shall be placed in a wall mounted cabinet equal to: Bussmann SFC which shall be located in the switchgear room.

END OF SECTION

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## SECTION 16195

## ELECTRICAL IDENTIFICATION

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.02 SUMMARY

- A. Section includes equipment identification labels.

## 1.03 SUBMITTALS

- A. Product Data – For each electrical identification product indicated.
- B. Identification Schedule – An index of nomenclature of electrical equipment and system components used in identification signs and labels.

## 1.04 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

## 1.05 COORDINATION

- A. Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.
- B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- C. Coordinate installation of identifying devices with location of access panels and doors.

## PART 2 - PRODUCTS

## 2.01 UNDERGROUND-LINE WARNING TAPE

- A. Tape
  - 1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical, controls and I&C raceways.
  - 2. Printing on tape shall be permanent and shall not be damaged by burial operations.

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3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.
  - B. Color and Printing
    1. Comply with ANSI Z535.1 through ANSI Z 535.5.
    2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, LOW VOLTAGE.
    3. Inscriptions for Orange-Colored Tapes: I&C CABLE, OPTICAL FIBER CABLE.
- 2.02 EQUIPMENT IDENTIFICATION LABELS
- A. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label – Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

## PART 3 - EXECUTION

## 3.01 INSTALLATION

- A. Verify identification of each item before installing identification products.
- B. Location – Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- C. Apply identification devices to services that require finish after completing finish work.
- D. Self-Adhesive Identification Products – Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- E. Underground-Line Warning Tape – During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches (150 to 200 mm) below finished grade. Use multiple tapes where width of multiple lines installed in a common trench exceeds 16 inches overall.

## 3.02 IDENTIFICATION SCHEDULE

- A. Locations of Underground Lines – Identify with underground-line warning tape for electrical, controls and I&C wiring and optical fiber cable.
- B. Equipment Identification Labels – On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems requiring labels include power, lighting, control, and I&C unless equipment is provided with its own identification.
  1. Labeling Instructions
    - a. Indoor Equipment – Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high. Utilize white

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lettering on black background.

- b. Outdoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2 inch height letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high. Utilize white lettering on black background.

2. Equipment to be Labeled

- a. Enclosures and electrical cabinets
- b. Enclosed switches
- c. Monitoring and control equipment

END OF SECTION



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## SECTION 16450

## GROUNDING

## PART 1 - GENERAL

## 1.01 SCOPE

This Section includes basic materials and methods for all Division 16 and related electrical work.

## 1.02 APPLICABLE REQUIREMENTS

NEC Article 250

## PART 2 - PRODUCTS

## 2.01 GROUND RODS

Ground rods shall be a minimum of 5/8" diameter by 20' length & copper-clad, unless otherwise specified. Grounding accessories shall be as manufactured by Burndy, Erico or Thompson.

## PART 3 - EXECUTION

## 3.01 INSTALLATION

- A. End to end fixtures shall be continuously bonded. Grounding contact of receptacles shall be connected to a solidly grounded conduit system or to a system grounding conductor (not the system neutral) by a stranded copper wire not smaller than 12 AWG or shall be grounded in some other approved manner.
- B. Bond all metal parts. Make equipment and bus connections with suitable lugs or clamps. Cadweld all wire-to-ground rod joints. Cadweld all wire-to-wire joints size 1/0 AWG and over.
- C. Bond all conduits stubbing under switchboards, transformers and similar locations using bonding bushings. Bond each conduit separately.
- D. Provide a bonding wire from grounding bushings on all conduit terminated at panels, boxes, wireways, panels, etc.
- E. Provide a bond wire in all flexible metal conduits and connect to the boxes at each end in an approved manner.
- F. Use PVC for sleeving grounding conductors, except that where sleeves are subject to extreme injury use rigid metal conduit bonded at both ends.
- G. Ground all separately derived sources such as transformers to adjacent cold water pipe or building steel in accordance with NEC.
- H. Grounding of all equipment should be accomplished with lugs equal to T & B "Locktite" one bolt hole tongue #31003 or approved equal.
- I. All conduit to service entrance equipment and loadcenter shall have a Grounding Bushing on all conduits and ground to box, cabinet, etc. This will give an added

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protection in grounding all the electrical systems.

END OF SECTION

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## SECTION 16011

## CODES &amp; STANDARDS

## PART 1 - GENERAL

1.01 THIS SECTION COVERS THE CODES, SPECIFICATIONS AND STANDARDS CONSIDERED MINIMUM REQUIREMENTS FOR MATERIALS, WORKMANSHIP AND SAFETY FOR ALL DIVISIONS 16 AND RELATED ELECTRICAL WORK.

1.02 SPECIFICATIONS, CODES AND STANDARDS

- A. Reference within this Specification to standards, codes or reference specifications implies that any item, product or material so identified must comply with all minimum requirements as stated therein, except packaging and shipping, unless indicated otherwise. Only the latest revised editions are applicable.

Some of the references used in this Division are as follows:

NFPA	National Fire Protective Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
U.L.	Underwriters' Laboratories, Inc.
ANSI	American National Standards Institute
FS	Federal Specification

- B. The Specifications, codes and standards indicated below and in other Sections, including the current addenda, amendments and errata, referred to by basic designation only, form a part of this specification.

NFPA-70	National Electrical Code (Current Edition)
NFPA-90A	Air Conditioning & Ventilation (Current Edition)
NFPA-101	Code for Safety to Life (Current Edition)
F.B.C.	Florida Building Code (Current Edition)

1.03 UNDERWRITERS' LABORATORIES

- A. Where materials and equipment are available under the continuing inspection and labeling service of U.L.; provide such material and equipment.
- B. Listing by Underwriters' Laboratories shall be evidenced by the label or:
- U.L. - Electrical Construction Materials List (Green Book)
  - U.L. - Electrical Appliance & Utilization Equipment List
  - U.L. - Building Materials List

## PART 2 - PRODUCTS - NOT USED

## PART 3 - EXECUTION - NOT USED

END OF SECTION

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## SECTION 16050

## BASIC ELECTRICAL MATERIALS AND METHODS

## PART 1 - GENERAL

## 1.01 SCOPE

- A. Provide all material as required for a complete project as required by the Drawings and in this Specification.

## 1.02 SHOP DRAWING SUBMITTALS

- A. Submit shop drawings for the following:

All raceways  
Wiring and Splices  
Contactors, Relays, Photocells  
Poles and Fixtures

## PART 2 - PRODUCTS

## 2.01 RACEWAY

- A. Galvanized Rigid Conduit (ANSI C80.0) – Rigid galvanized steel conduit "RGS" shall be U.L. Approved, Schedule 40, mild steel pipe, zinc-coated on the inside and outside. Fittings shall be zinc-coated, U.L. Approved.
- B. PVC Conduit – Underground PVC conduit shall be Schedule 40 or Schedule 80 unless otherwise noted, and shall be U.L. approved. PVC conduit shall be Schedule 80 when installed above ground.
- C. Locations: – Conduit shall be used as follows:
  - 1. All above ground grade exposed conduits shall be hot dipped galvanized rigid steel except otherwise noted on the Drawings.
  - 2. All conduits penetrating rated fire walls or rated fire floors shall be installed with U.L. Approved devices to maintain the fire rating of the wall or floor penetrated.

## 2.02 WIRE AND CONNECTORS

- A. Cable shall be rated for 600 volts and shall meet the requirements below:
  - 1. Conductors shall be stranded.
  - 2. All wire shall be brought to the job in unbroken packages and shall bear the date of manufacturing; not older than 12 months.
  - 3. Type of wire shall be THWN or THHN rated 75 degrees C, suitable for wet locations except where otherwise required by the drawings.

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4. No wire smaller than No. 12 AWG shall be used unless specifically indicated.
5. Conductor metal shall be copper.
6. All conductors shall be meggered after installation and insulation must be in compliance with the Insulated Power Cable Engineers Association Minimum Values of Insulation Resistance.

## 2.03 BOXES

- A. Boxes for wiring devices (switches and receptacles) installed outdoors or wet locations shall be weatherproof fiberglass with polycarbonate cover plates. Junction boxes shall be NEMA 4X construction. All boxes shall be securely mounted, plumb and level, in readily accessible locations.
- B. Pull boxes in ground shall be Pencil HHPL 172012 or approved equal with lid marked "ELECTRIC".

## 2.04 GROUNDING

- A. Grounding and Bonding – All Grounding and Bonding shall be in accordance with NFPA 70. Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in raceways, and neutral conductor of wiring systems.
- B. Grounding Conductor – Provide an insulated, green-colored equipment grounding conductor in all feeder and branch circuits. This conductor shall be separate from the electrical system neutral conductor. Conduits will not be approved as grounding conductor.
- C. The CONTRACTOR shall install all ground rods, ground wires, and connectors as required for the complete grounding system.
- D. All metal parts and grounding conductors in each manhole or pullbox shall be grounded to a local ground rod.
- E. Resistance – Readings shall not be taken within 48 hours of a rainfall.
- F. The CONTRACTOR shall provide a written report for all grounding test results to the ENGINEER. The test shall include all ground connections. The report shall be signed by the OWNER of the contracting firm and shall include: test date, time, weather conditions on test date, weather conditions 3 days prior to the test date, location, and results.
- G. All raceways require grounding conductors; metallic raceways are not adequate grounding paths. Bonding conductors through the raceway systems shall be continuous from main switch ground buses to panel ground bars of panelboards, and from panel grounding bars of panelboards, and motor control centers to branch circuit outlets, motors, lights, etc. These ground conductors are required throughout the project regardless of whether conduit runs or the Cable and Conduit Schedule show ground conductors on the Drawings.

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- H. All connections made below grade shall be of the exothermic type.

### PART 3 - EXECUTION

#### 3.01 CONDUIT INSTALLATION

##### A. General

1. Nylon pull cords shall be installed in all empty conduits. Wire shall not be installed until all work of any nature that may cause damage is completed, including pouring of concrete. Mechanical means shall not be used in pulling in wires 8 AWG or smaller.
2. The use of running threads is prohibited and where some such device is necessary, split couplings, Erickson couplings, or equal shall be used. Where water-tight conduit installations are required, water-tight conduit unions shall be used.
3. All conduits shall be cleaned by pulling a brush swab through before installing cables.
4. All conduits shall be sealed at each end with electrical putty or Duct Seal. Special care shall be taken at all equipment where entrance of moisture could be detrimental to equipment.

##### B. Handling

1. Conduits subjected to rough handling or usage shall be removed from the premises.
2. Conduits must be kept dry and free of water or debris with approved pipe plugs or caps. Care shall be given that plugs or caps are installed before pouring of concrete. All spare conduits shall remain plugged or capped upon project completion.

##### C. Concrete and Masonry

1. Where conduits pass through exterior concrete walls or fittings below grade, the entrances shall be made watertight. This shall be done by providing pipe sleeves in the concrete with 1/2" minimum clearance around the conduits, and caulking with askum and sealant, or by means of conduit entrance seals.
2. Where embedded conduits cross expansion joints, furnish and install offset expansion joints or sliding expansion joints. Sliding expansion joints shall be made with straps and clamps.

##### D. Panelboards and Boxes

1. Conduits entering panelboards, pull boxes, or outlet boxes shall be secured in place by galvanized locknuts and bushings, one locknut outside and one locknut inside of box with bushing on conduit end. The locknuts shall be tightened against the box without deforming the box. Bushings shall be of the insulating type.



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## E. Bending

1. Field conduit bends shall be made with standard tools and equipment manufactured especially for conduit bending.

## F. Mounting and Concealing

1. Conduit runs shall always be concealed in finished spaces and may be exposed in industrial spaces except where indicated on the Drawings.
2. Exposed runs of conduits shall be installed with runs parallel or perpendicular to walls, structural members or intersections of vertical planes and ceilings, with right angle turns consisting of symmetrical bends or pull boxes as indicated on the Drawings. Bends and offsets shall be avoided where possible.
3. Where conduits are run individually, they shall be supported by approved pipe straps, secured by means of: 1) toggle bolts or hollow masonry; 2) expansion shields and machine screws or standard preset inserts on concrete or solid masonry; 3) machine screws or bolts on metal surfaces, and wood screws on wood construction. The use of perforated straps or wires will not be permitted.
4. Concrete inserts and pipe straps installed shall be stainless steel unless otherwise noted on the Drawings. All bolts, nuts, washers, and screws shall be stainless steel. Individual hangers, trapeze hanger, and rods shall be prime-coated and painted. Conduit support clamps shall be the two-piece type.
5. Conduit support struts, clamps, bolts, nuts and washers installed outdoors and in corrosive atmosphere indoors or on floors shall be stainless steel.
6. In furred ceilings, conduit runs shall be supported from structure, not furring.

## 3.02 TERMINATIONS AND SPLICES

- A. Terminations of power cable shall be by means of U.L. approved connectors. All connectors shall meet U.L. 486B and shall be compatible with the conductor material.
- B. Splicing of power, control, or instrumentation wiring will not be allowed except by written approval of the ENGINEER. Where splicing is allowed, splices shall be made waterproof regardless of location.

## 3.03 GROUNDING

- A. General – Grounding shall be as indicated, and as required by NFPA 70 and ANSI-C2.
- B. Grounding Connections – Grounding connections which are buried or otherwise normally inaccessible, and excepting specifically those connections for which access for periodic testing is required, shall be made by exothermic weld. Exothermic welds shall be made strictly in accordance with the weld manufacturer's written recommendations. Welds which have "puffed up" or which show convex surfaces,

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indicating improper cleaning, are not acceptable. No mechanical connector is required at exothermic weldments.

- C. Grounding Grid System – Conductors shall be buried a minimum of 24 inches in the ground. All cable crossings shall be securely bonded and the system connected to the ground system as well as to all equipment and structural steel work, and to all water piping.
- D. Grounding Conductors – Conductors shall be insulated copper wire and sized as required by National Electrical Code.

### 3.04 FIELD TESTS

- A. As an exception to requirements that may be stated elsewhere in the Contract, the ENGINEER shall be given five working days notice prior to each test. The CONTRACTOR shall demonstrate that all circuits and devices are in good operating conditions.
- B. Test on 600 volts wiring – Verify all 600 volts wiring has no short circuits or accidental grounds. Perform insulation resistance tests on all wiring using an instrument which applies a voltage of approximately 500 volts to provide a direct reading of resistance. Minimum resistance shall be 1 megohm. The conductor loop resistance of each pair shall also be measured. The mutual capacitance between conductors of each pair shall also be measured. Provide written results for approval.

### 3.05 WIRE AND CABLE INSTALLATION

- A. Conductors shall not be pulled into raceway until:
  - 1. Raceway system has been inspected and approved by the ENGINEER.
  - 2. Plastering and concrete have been completed in affected areas.
  - 3. Raceway system has been freed of moisture and debris.
- B. Conductors of No. 8 size and smaller shall be hand pulled. Larger conductors may be installed using power winches. Wire pulling lubricant, where needed, shall be U.L. approved. Wire in panels, cabinets, and gutter shall be neatly grouped, using nylon tie straps, and fanned out to terminals.
- C. Building wire conductors THHN / THWN installed below grade, or in concrete slabs on grade, shall have type RHW-USE insulation, 600 volts. Building wire shall be stranded.
- D. Each cable or wire in panels, pull boxes, manholes, or troughs shall have a permanent identification, with numbers and letters indicated on the conduit and cable schedule. For underground cable identification tag, see drawing.
- E. Lubricants – Lubricants for assisting in the pulling of cables shall be those specifically recommended by the cable manufacturer. The lubricant shall not be deleterious to the cable sheath, jacket, or outer coverings, and shall be U.L.

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approved. Use Polywater J or equal.

- F. Cable Pulling Tensions – Shall not exceed the maximum pulling tension recommended by the cable manufacturer.

### 3.06 MOUNTING AND SUPPORTING ELECTRIC EQUIPMENT

- A. Furnish and install all supports, hangers, and inserts required to mount fixtures, conduits, cables, pull boxes, and other equipment furnished under this section or furnished for installation under this section.
- B. All items shall be supported from the structural portion of the building and studs, except standard ceiling-mounted lighting fixtures and small devices, that may be supported from ceiling system where permitted by the ENGINEER. However, no sagging of the ceiling will be permitted. Supports and hangers shall be of types approved by Underwriter's Laboratories.
- C. Perforated straps and wire are not permitted for supporting electrical devices. Anchors shall be of approved types.
- D. All supports, hangers, hardware, etc. used outdoors, shall be stainless steel and in corrosive atmosphere, or in hazardous areas shall be nonferrous, corrosion resistant, or stainless steel. Supports shall be selected to avoid galvanic reactions. Support devices shall be submitted for approval.

### 3.07 UNDERGROUND WORK

- A. **Excavation for Electrical Work**  
Excavation or drilling, backfill and repair of paving and grassing is to be in the bid of the electrical contractor. The actual work need not be performed by electrical trades. However, the electrical contractor is responsible for all excavation, drilling, dewatering, backfilling, tamping, and repair of pavements and grassing required in support of electrical work. All areas disturbed by electrical work shall be repaired to their original conditions, or as indicated on the Drawings.
- B. **Coordination**  
The electrical contractor must check for existing utilities before commencing any excavation or drilling. Contract Drawings and other trades are to be consulted to avoid interference with other utilities on this project. In the event of damage to existing utilities, the OWNER and ENGINEER shall be immediately notified, and the damage shall be immediately repaired at no cost to the Owner.
- C. **Precautions**  
The electrical contractor must take every reasonable precaution to avoid interferences. In the vicinity of a suspected interference, excavations shall be dug by hand.
- D. **Excavating, Drilling and Backfilling**
1. Materials for backfill shall be as specified in Specification 02222 - Excavation and Backfill for Utility Systems, Section 2.02.

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2. Locate and protect existing utilities and other underground work in a manner which will insure that no damage or service interruption will result from excavating and backfilling.
3. Protect property from damage which might result from excavating and backfilling.
4. Protect persons from injury at excavations, by shoring up, and using barricades, warnings and illumination.
5. Coordinate excavations with weather conditions, to minimize the possibility of washouts, settlements, and other damages and hazards.
6. Dewater excavations as necessary. Protect excavations from inflow of surface water. Pump minor inflow of ground water from excavations; protect excavations from major inflow of ground water by installing temporary sheeting and waterproofing. Provide adequate barriers which will protect other excavations and below grade property from being damaged by water, sediment, or erosion from or through the electrical work excavations.
7. No organic material is permitted in backfill. All vegetation, peat, sod or other organic matter shall be removed from the premises.
8. Except under roadways, backfill material shall be clean sand or shell rock. No debris or trash may be used as backfill.
9. Under roadways, backfill material shall be the same as comprising the road bed.
10. Backfill excavations using 8-inch high courses of backfill material, uniformly compacted to 95 percent density per ASTM Standard D1557, using power-driven, hand-operated compaction equipment. Watering the backfill for compaction is not an acceptable method.
11. Backfill to elevations matching adjacent grades. Where subsidence is measurable or observable at electrical work excavations during the warranty period, remove the surface (pavement, lawn or other finish) add backfill material, compact, and replace the surface treatment. Restore the appearance, quality, and condition of the surface or finish to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.
12. Where excavation and backfill for electrical work passes through or occurs in a landscaped area, repair or replace the landscape work to match the original condition and quality of work.
13. Where excavation and backfill for electrical work passes through or occurs in an area of paving or flooring, replace and restore the construction and finish of the paving or flooring to match the original condition and quality of the work.

## E. Underground

1. Underground conduits not under concrete slabs, shall be buried at least two feet below finished grade for circuits rated 600 volts or less. Where steel conduit penetrates ground or concrete, the conduit shall be painted with

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two coats of asphaltic base paint one foot on each side of penetration.

2. Transition from PVC to RGS shall be made prior to elbow below grade. Paint RGS with bitumastic, 12 inches above and below grade.

### 3.08 CONCRETE MANHOLES AND PULL BOXES

- A. Provide precast concrete manholes and pull boxes as indicated on the drawings. Manholes and pull boxes shall be installed on firmly compacted ground level and plumb at the elevations indicated on the drawings. Manholes and pull boxes shall be equipped with pulling-in irons opposite and below each ductway entrance. Manholes and pull boxes shall have cable supports so that each cable is supported at a minimum of 3 foot intervals within the manhole or pull box. Cable supports shall be fastened with galvanized bolts and shall be fabricated of fiberglass or galvanized steel.

Make provision for drainage and grounding. Install grounding rods at each manhole.

- B. Traffic Covers – H-2-044 traffic rated covers shall be provided for manholes and pull boxes with identification as follows:

ELECTRIC" where voltages within are 600 volts and less.

"SIGNAL" for instrumentation, telephone, and control.

- C. Covers and frames shall be cast iron or hot dip galvanized.

End bells shall be cast in boxes by precast manhole manufacturer for all conduit entrances indicated on the drawings.

- D. Every manhole shall be equipped with 24" x 24" concrete knockouts for future conduit installation on two opposing walls.

### 3.09 CONDUIT INSTALLATION

- A. General – Conduits in structural slabs shall be placed between the upper and the lower layers of reinforcing steel, requiring careful bending of conduits. Conduits embedded in concrete slabs shall be spaced not less than eight inches on centers or as widely spaced as possible where they converge at panels or junction boxes. Conduits running parallel to slab supports, such as beams, columns and structural walls, shall be installed not less than 12 inches from such supporting elements. To prevent displacement during concrete pour, saddle supports for conduit, outlet boxes, junction boxes, inserts, etc., shall be secured.

### 3.10 WIRE AND CABLE INSTALLATION

- A. Installation of Cables in Manholes, Handholes, and Vaults. Do not install cables utilizing the shortest route, but route along those walls providing the longest route and the maximum spare cable lengths. Form all cables to closely parallel walls, not to interfere with duct entrances, and support on brackets and cable insulators. In existing manholes, handholes and vaults where new ducts are to be terminated, or where new cables are to be installed, the existing installation of cables, cable supports, and grounding shall be modified as required for a neat and workmanlike

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installation, with all cables properly arranged and supported. Support cable splices in underground structures by racks on each side of the splice. If splicing is approved, locate splices to prevent cyclic bending in the spliced sheath and out of the water. Install cables at middle and bottom of cable racks, leaving top space opening for future cables, except as otherwise indicated. Provide one spare three-insulator rack arm for each cable rack in each underground structure.

- B. Cable Markers (or tags) in Manholes and Handholes – Provide cable markers or tags for each cable or wire passing through or leaving manholes or handholes and at each terminal. Tags shall be stainless steel, bronze, lead strap, or copper strip, approximately 1/16 inch thick, or hard plastic 1/8 inch thick, suitable for immersion in salt water, and of sufficient length for imprinting the legend on one line, using raised letters not less than 1/4 inch in size, and shall be permanently marked or stamped with the identification as indicated. Use of two color laminated plastic is acceptable. Plastic markers shall be dark in color, and markings shall be light in color to provide contrast so that identification can be easily read. Fastening material shall be of a type that will not deteriorate when exposed to water with a high saline content.
- C. All supports, hangers, hardware, etc. used outdoors, shall be stainless steel. In corrosive atmosphere, or in hazardous areas, shall be non-ferrous, corrosion resistant, or stainless steel. Supports shall be selected to avoid galvanic reactions. Support devices shall be submitted for approval.
- D. Spare conduits shall be on top or accessible sides and identified uniquely at each location and active conduits shall be located on the bottom unless noted otherwise.

END OF SECTION

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## SECTION 16110

## RACEWAY AND BOXES

## PART 1 - GENERAL

## 1.01 SCOPE

- A. This Section includes basic materials and electrical methods for all of Division 16, Electrical and Related Work.

## PART 2 - PRODUCTS

## 2.01 RACEWAYS AND FITTINGS

- A. Rigid Metal Conduit – Hot-dipped galvanized heavy wall rigid steel conduit shall be used on all electrical and instrumentation systems. Conduit shall conform to Federal Specification WW-C-581d and fittings shall conform to Federal Specification W-F-408, Type I and III, Class 1, Style 2.
- B. Liquid Tight Flexible Metal Conduit – Flexible metal conduit shall be used on all electrical and instrumentation systems. Liquid tight flexible conduit shall conform to NEC Article 351 as manufactured by Appleton, Robroy, or Anaconda. Fittings shall be as manufactured by Midwest or Robroy and conform to Federal Specification W-F-406b, Type I, Class 3.
- C. Rigid Non-Metallic Conduit – Polyvinyl chloride (PVC) conduit, boxes and fittings shall conform to NEMA TC-2 and to Military Specifications MIL-C-23571 for Type II, Schedule 40 and shall be used on specified grounding and utility company systems only.
- D. Wireways and Auxiliary Gutters – Wireways and auxiliary gutters shall be galvanized steel with removable covers unless indicated as hinged. Components shall be as manufactured by Square 'D', Hoffman, Keystone, or General Electric. All wireways shall be without manufactured knockouts.

## 2.02 BOXES AND ACCESSORIES

- A. Sheet steel boxes and accessories shall conform to Federal Specification W-J-800c, as manufactured by Appleton, Steel City, or Raco.
- B. Cast metal ferrous outlets shall conform to Federal Specification W-C-568a, as manufactured by Appleton, Pyle-National, or Crouse-Hinds.
- C. Pull boxes and junction boxes larger than 4-11/16" shall be constructed of galvanized steel in accordance with NFPA 70, Articles #370 and #373. Boxes shall be as manufactured by Hoffman, Boss, or Keystone. All boxes shall be without manufactured knockouts.
- D. Cast, malleable iron outlet boxes shall have threaded conduit entrances and gasketed covers. Aluminum-type is not permitted. Boxes shall have a minimum of two hubs on the bottom, as manufactured by Appleton or Crouse-Hinds.
- E. Concrete pull boxes shall be of the open bottom type, with an iron, locking cover marked "ELECTRIC" or "SIGNAL" as applicable, and shall be U.L. Listed and meet all

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codes.

- F. Rigid Conduit Coupling – Where rigid steel conduit is used, jointing conduit runs shall be connected by a threaded coupling or three piece couplings. Threadless coupling will not be permitted.
- G. Rigid Conduit Bushing – Where rigid steel conduit is used, all terminations in boxes, panels, etc. shall have locknuts on both sides of equipment, with a bonded, grounding bushing.
- H. Field Cut Threads – Field-cut threads must be cleaned with oil and painted with a coat of aluminum, or galvanized paint. Newly cut threads that are not coated will have rust or corrosion develop, and will inhibit the grounding path of the conduit run.
- I. Conduit Nipples – The use of all-thread is prohibited.

### 2.03 EXPANSION FITTINGS

- A. Any expansion fittings used shall be manufactured by O-Z Electrical Manufacturing Company, and specified as follows: Rigid metal conduit - Type AX; Electrical metallic tubing - Type TX.
- B. Miscellaneous – Coatings – Tnemec 46-465

## PART 3 - EXECUTION

### 3.01 RACEWAYS

- A. Use rigid, non-metallic conduit as follows, unless noted otherwise: Grounding systems and utility systems only.
- B. Paint metal conduit in floor slab or in the ground with 2 coats of Tnemec 46-465.
- C. Use liquid tight, flexible metal conduit for all connections to vibrating equipment, such as motors, valves, and devices on piping or ductwork. The maximum length shall be restricted to 18" or less, any longer lengths must have approval. It shall be restricted for use within 24 inches above the floor elevation. (A green bonding conductor will be required in all runs, with other conductors.)
- D. Install exposed conduit parallel with, or at right angles to the building lines. Conduit larger than 1", except as indicated, in reinforced concrete slabs shall be parallel with, or at right angles to the supports of the slab. Conduit in concrete shall be located so as not to affect the structural strength of the slabs. Conceal all conduits in walls, above ceilings, in or under slabs or in furring, except in mechanical and electrical rooms and as indicated.
- E. Route feeders, home runs, and conduits where indicated, except those minor deviations as approved, will be permitted.
- F. All conduits that are embedded in concrete, pass through concrete, or stub-up shall have a 30 mil coating of Tnemec 46-465 over its entire length where embedded in concrete, and 12 inches before entering and 12 inches after exiting the concrete.

### 3.02 BOXES AND ACCESSORIES

- A. Minimum size outlet box shall be 4" square by 1-1/2" deep unless otherwise approved or indicated otherwise.

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- B. Use cast malleable iron boxes for outlets with gasketed covers for all exterior and for all damp locations.

### 3.03 MISCELLANEOUS

- A. Provide approved fire stopping materials at all chases to prevent drafts.
- B. Provide expansion fittings in conduit runs crossing expansion joints in the structure.
- C. Provide Jet Line #232 in all empty conduits.
- D. Rigid Conduit fitting shall be cast, malleable iron, with stamped, galvanized steel, stainless steel screw covers, and gasket for use inside. Outside cast malleable iron galvanized, stainless steel screw and gasket.

END OF SECTION

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## SECTION 16120

## CONDUCTORS

## PART 1 - GENERAL

This Section includes basic materials and methods for all of Division 16, Electrical and Related Work.

## 1.01 APPLICABLE REQUIREMENTS

NEC Article 310 and 400  
F.S.J-C-30  
F.S.W-S-6106

## PART 2 - PRODUCTS

## 2.01 CONDUCTORS

- A. Conductors shall conform to Federal Specification J-C-30 for 600 volts, Types THWN/THHN, or XHHW stranded or as shown on the drawings. Sizes are AWG unless otherwise noted.
- B. Grounding conductors larger than Size 1 AWG shall be soft drawn, bare copper or insulated copper. Control conductors for 100 to 600 volts shall be size 14 AWG copper, stranded, and color coded unless indicated otherwise.
- C. Control conductors for 50 volts and under shall be plastic jacketed thermostat cable, Size 18 AWG single conductor, copper, multi-conductor as required. Fixture wire shall be Type THHN for all through wiring where permitted.

## 2.02 PORTABLE CORDS

- A. Portable cord shall be stranded copper, UL Listed, and resistant to water, acid, and alkalis.
- B. Each cord shall have one green covered conductor that shall be used as a grounding conductor.

## 2.03 SPLICES AND TERMINATIONS

- A. Connections shall comply with Federal Specification W-S-610b. Connectors for temperatures to 105NC shall be Ideal Wing Nut or 3M-Scotchloc.
- B. Tape shall be Scotch 33 or slip-knot grey. Voids shall be filled with rubber tape or Scotchfill.
- C. Terminal boards shall be General Electric, Type CR151, type A2. Lugs for the terminal boards shall be the locking tongue type. Control terminals and motor connections up to size 3 shall be ring tongue type as manufactured by T&B Sta-Kon.
- D. Heat shrink for all splices outdoors. Insulating and sealing of all in-line, cable splices from 16 AWG through 1000 kcmil shall be done in accordance with the instructions provided with the Shrink-Kon heat shrinkable insulators, catalog series HS as manufactured by Thomas & Betts.
- E. The connector insulator must be made of thermally stabilized, homogeneous

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polyolefin having internally applied sealant. It must have Underwriter's Listing (UL48, 90NC, 600V) and be approved for the use. It must be usable without additional covering or adhesive, both indoors and outdoors, in overhead, direct buried, or submersed applications at rated voltage. It must not be adversely affected by moisture, ozone, oils, fuels, mild acids and alkalis, or ultraviolet light. It must be compatible with all commonly used cable jacket materials including rubber, plastic, lead, steel, aluminum, and copper. All conductors larger than #10 shall have Noalox Non-Corrosive Paste applied to wires' ends and terminals before connections are made. This will prevent or retard corrosion.

**PART 3 - EXECUTION****3.01 CONDUCTORS**

- A. Conductors size 10 AWG and smaller shall be copper and have insulation colored for phases A, B, and N respectively as follows for single phase systems: 120/240 volts, black, red, and white.
- B. All-bonding conductors shall have a green covering and shall be the same size as the circuit conductors unless otherwise indicated.
- C. Installation of conductors shall be made only in completed raceway systems and all conductors in any conduit shall be pulled in together.
- D. Use wire pulling compounds or lubricants as listed by Underwriters' Laboratories or talc, graphite, or soapstone.

**3.02 SPLICES AND TERMINATIONS**

- A. Use solder-less terminal lugs on all standard conductors. Use approved solder-less connectors for all splices. Keep splices to a minimum.
- B. Splice all neutrals prior to connection to wiring devices. Splices other than pre-insulated connectors shall be covered neatly with insulation type equivalent in value to the conductor insulation. Use minimum of 2 layers of tape.

**3.03 PHASING AND IDENTIFICATION**

- A. The phase designation of all secondary conductors shall be the same and shall be indicated in or on all 3-phase outlets, transformers, panelboards, and disconnect switches, and they shall be connected with uniform phase sequence.
- B. Control wiring shall have a Brady® label or equal attached, secured with a clear piece of heat shrink tubing over the numbers. The numbers shall be attached 1 inch from each end. Tag each individual conductor or wire with a label stating the terminal designation indicated on schematic diagrams, or given on manufacturer's equipment lists, and at each terminal strip, relay, etc.

**3.04 NUMBER OF CONDUCTORS**

- A. For convenience and simplicity, wire tics are shown only on home runs other than power circuits. The Contractor shall determine the correct combination of wires to be run in all raceways including home runs, branch circuit wiring and switch legs.
- B. A green ground wire must be included in all conduits. Neutral wires shall be determined by the load and proper phasing on multi-wire branch circuits.

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- C. All conductors shall have identification per NEC and local codes.
  - 1. Colored tape for feeder conductors should be secured on the conductor with clear piece of heat shrink tubing.
- D. Conduit fill shall be sized per National Electric Code. All 120 volt circuits shall each have individual neutrals.

### 3.05 TESTING

- A. After wires has been pulled in raceways and before hook-up, wires shall be subject to an insulation test. A Megohmmeter of 500 volts shall be used, and a minimum of 10 megohms will be acceptable. Test shall be witnessed by the ENGINEER. A 48-hour notification must be given before test(s) commence. It is typical that wire was abused during installation, usually due to lack of lubrication. The test will reveal any damage to insulation on wiring.

END OF SECTION

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## SECTION 16140

## WIRING DEVICES

## PART 1 - GENERAL

## 1.01 RELATED WORK SPECIFIED ELSEWHERE

Basic Materials &amp; Methods

## 1.02 APPLICABLE DOCUMENTS

NEMA WD-1 - Wiring Devices, Non-locking  
NEMA WD-5 - Wiring Devices, locking type  
F.S. W-P-455a - Wall Plates

## PART 2 - PRODUCTS

## 2.01 RECEPTACLES

- A. All receptacles shall be the grounding type and shall conform to applicable portions of NEMA Standards WD-1 and WD-5.

NEMA Configuration - #5-20, duplex, Ivory

P &amp; S #5342-I

Leviton - #5342-I

NEMA Configuration #1050

Hubbell - 7512-G receptacle

Hubbell - 7118 stainless steel plate

## 2.02 PLATES AND COVERS

- A. Wall plates for recessed devices shall conform to Federal Specification W-P-455a and shall be of Ivory color with matching screws unless indicated otherwise, and of the configuration required for the devices installed.

Leviton - 86000 Line, P &amp; S or equal

Surface (raised) covers for 4" square boxes shall be 1/2" deep.

Surface covers shall be as manufactured by Steel City, Appleton or Raco of the configuration required. Cover plates indicated (WP) weatherproof shall be made of Type 302 stainless steel with stainless steel springs, screws and gaskets. Sierra Series "WP" of the configuration required.

## 2.03 ATTACHMENT CAPS AND CONNECTORS

- A. Caps shall be NEMA Standard mates to the receptacles and connectors used and shall be as manufactured by Hubbell. Provide one cap for each receptacle other than the duplex type.
- B. Electrical contractor shall connect all equipment furnished by Owner or other contractors, including caps and cords and materials required to complete the installation.



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PART 3 - EXECUTION

- 3.01 INSTALL PLATES AND COVERS ON ALL OUTLETS. INSTALL ALL DEVICES UNIFORMLY IN EACH AREA. USE 20 AMPERES RECEPTACLES EVERYWHERE.

END OF SECTION

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## SECTION 16160

## PANELBOARDS

## PART 1 - GENERAL

## 1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Basic Materials and Methods
- B. Section 16180 – Circuit Breakers, Switches & Fuses

## 1.02 APPLICABLE DOCUMENTS

- A. NEMA PB-1, 1957 - Panelboards
- B. F.S. W-P-115a - Panelboards
- C. NFPA-70 - Articles 110, 240, 384

## 1.03 SUBMITTALS

- A. Submit Shop Drawings for review on each panelboard indicating cabinet dimensions, component arrangements, characteristics, and sizes.

## PART 2 - PRODUCTS

## 2.01 PANELBOARDS

- A. Panelboards shall conform to Federal Specification W-P=115a, complete with cabinets and locks. Fronts shall be finished to resist corrosion with not less than one priming coat and one pearl gray finishing coat. Components shall be arranged approximately as indicated. Bus shall be copper.
- B. Circuits shall be numbered serially from top to bottom with odd numbers on the left. Adjacent poles of single pole devices shall be of opposite polarity with split-phase bussing.
- C. Provide keys, each of which will operate all the panelboard cabinet locks. Provide a typewritten directory with a transparent protective cover on the inside of the panelboard cover. Panels shall be factory assembled and tested. Circuit breaker panelboards shall be Type I, Class 1, bolt-on type.
- D. Panelboards shall be as manufactured by Square “D”, Siemens, General Electric, or Eaton Corporation.
- E. Panelboard bus shall be copper.

## PART 3 - EXECUTION

## 3.01 GENERAL

Mount all panels with tops at 6' above the floor, except as noted or approved otherwise. Identify all panels and all devices. Nipple all adjacent panels together using minimum 1-1/2" conduit. Clean all debris out of cabinets prior to installing covers.

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END OF SECTION

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## SECTION 16180

## SAFETY SWITCHES, CIRCUIT BREAKERS &amp; FUSES

## PART 1 - GENERAL

## 1.01 RELATED WORK SPECIFIED ELSEWHERE:

Panelboards - Section 16160

## Applicable Documents:

NEMA AB-1 - Molded Case Circuit Breakers  
NEMA IC-1 - Industrial Control  
F.S. W-S-865c - Enclosed Switches  
F.S. W-C-375a - Circuit Breakers  
U.L.-198 - Fuses  
NEMA FU-1 - Fuses

## 1.02 SUBMITTALS:

Submit Shop Drawings for review including catalog cuts showing sizes, types and characteristics of all products.

## PART 2 - PRODUCTS

## 2.01 SAFETY SWITCHES/CIRCUIT BREAKER DISCONNECTS:

- A. Safety switches shall conform to Federal Specifications W-S-865c, heavy duty type HD, fusible or non-fusible, with the poles, ampere, voltage and horsepower ratings indicated and shall have solid neutrals and Class R clips. Lugs shall be U.L. listed for copper-aluminum.
- B. Enclosures for safety switches shall be NEMA-1, general purpose, except that switches indicated (WP) weatherproof, shall be NEMA-3R unless marked NEMA-4. Provide hubs as required for NEMA-3R enclosures with suitable gaskets and bonding means.
- C. Switches and disconnects shall be as manufactured by Square 'D', General Electric, Siemens, or Eaton.
- D. Circuit breaker disconnects may be used in lieu of safety switches providing they comply with the safety switch requirements and are applied within their ratings and a schedule is submitted for approval.

## 2.02 CIRCUIT BREAKERS, MOLDED CASE:

- A. Circuit breakers shall conform to Fed. Spec. W-C-375a and NEMA Standard AB-1 unless indicated otherwise. Circuit breakers shall be of the ampere rating, voltage rating, number of poles and class or interrupting capacity (I.C.) as indicated. Interrupting ratings are given in root mean square (RMS), symmetrical amperes based on NEMA test procedures. Lugs and terminals shall be U.L. listed for copper-aluminum. Accessories shall be 120 volts.
- B. Each circuit breaker shall have a trip unit for each pole with elements providing

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inverse time delay under overload conditions and instantaneous magnetic trip for short circuit protection unless indicated as non-automatic. Trip elements shall operate a common trip bar to open all elements.

## 2.03 FUSES:

- A. Provide rejection fuses for all fusible equipment regardless of which section has furnished such equipment.
- B. Fuses shall be of the ratings shown on the drawings, U.L. listed and shall be Bussman Manufacturing Co., Gould-Shawmut Company, CEFCO or approved equal.
- C. All fuses shall be current limiting and have an interrupting capacity of at least 200,000 amperes RMS symmetrical.
- D. The time-current characteristics and ratings shall be such that positive selective coordination is assured.
- E. Fuses, 600 amperes and lower, where applied to general feeder and branch circuit protection, shall conform to U.L. Class RK-1 standards and be Bussmann Type LPN-RK-SP LPS-RK-SP, "Low Peak". Gould-Shawmut dual element "Amp-Trap."
- F. Fuses, where required for circuit breaker protection shall conform to U.L. Class RK-1 standards and be Bussmann Type LPN-RK-SP or LPS-RK-SP "Low Peak", or Gould-Shawmut Class RK1 "Amp-Trap."
- G. Coordination and current limitations or the protection of each part of the electrical system must be designed around the type and class and manufacturer selected for that type and class.

## PART 3 - EXECUTION

## 3.01 INSTALLATION:

- A. Mount grouped switches, disconnects and controls on backboards or unistrut. Provide labels on or in all fusible equipment indicating the type and size replacement fuse required.
- B. Generally, mount switches and disconnects between 4' and 5' A.F.F., readily accessible. Always adhere to minimum height requirements as per riser diagram on plans.

## 3.02 FUSES:

- A. Install all fuses as required where indicated on the drawings and where required by the National Electrical Code, special attention shall be given to air conditioning equipment.
- B. Provide 10% spares (minimum of three) of each size and type of fuses furnished. Spare fuses shall be placed in a wall mounted cabinet equal to: Bussmann SFC which shall be located in the switchgear room.

END OF SECTION

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## SECTION 16195

## ELECTRICAL IDENTIFICATION

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.02 SUMMARY

- A. Section includes equipment identification labels.

## 1.03 SUBMITTALS

- A. Product Data – For each electrical identification product indicated.
- B. Identification Schedule – An index of nomenclature of electrical equipment and system components used in identification signs and labels.

## 1.04 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

## 1.05 COORDINATION

- A. Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.
- B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- C. Coordinate installation of identifying devices with location of access panels and doors.

## PART 2 - PRODUCTS

## 2.01 UNDERGROUND-LINE WARNING TAPE

- A. Tape
  - 1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical, controls and I&C raceways.
  - 2. Printing on tape shall be permanent and shall not be damaged by burial operations.

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3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.
  - B. Color and Printing
    1. Comply with ANSI Z535.1 through ANSI Z 535.5.
    2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, LOW VOLTAGE.
    3. Inscriptions for Orange-Colored Tapes: I&C CABLE, OPTICAL FIBER CABLE.
- 2.02 EQUIPMENT IDENTIFICATION LABELS
- A. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label – Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

## PART 3 - EXECUTION

## 3.01 INSTALLATION

- A. Verify identification of each item before installing identification products.
- B. Location – Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- C. Apply identification devices to services that require finish after completing finish work.
- D. Self-Adhesive Identification Products – Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- E. Underground-Line Warning Tape – During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches (150 to 200 mm) below finished grade. Use multiple tapes where width of multiple lines installed in a common trench exceeds 16 inches overall.

## 3.02 IDENTIFICATION SCHEDULE

- A. Locations of Underground Lines – Identify with underground-line warning tape for electrical, controls and I&C wiring and optical fiber cable.
- B. Equipment Identification Labels – On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems requiring labels include power, lighting, control, and I&C unless equipment is provided with its own identification.
  1. Labeling Instructions
    - a. Indoor Equipment – Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high. Utilize white

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lettering on black background.

- b. Outdoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2 inch height letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high. Utilize white lettering on black background.

2. Equipment to be Labeled

- a. Enclosures and electrical cabinets
- b. Enclosed switches
- c. Monitoring and control equipment

END OF SECTION



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## SECTION 16450

## GROUNDING

## PART 1 - GENERAL

## 1.01 SCOPE

This Section includes basic materials and methods for all Division 16 and related electrical work.

## 1.02 APPLICABLE REQUIREMENTS

NEC Article 250

## PART 2 - PRODUCTS

## 2.01 GROUND RODS

Ground rods shall be a minimum of 5/8" diameter by 20' length & copper-clad, unless otherwise specified. Grounding accessories shall be as manufactured by Burndy, Erico or Thompson.

## PART 3 - EXECUTION

## 3.01 INSTALLATION

- A. End to end fixtures shall be continuously bonded. Grounding contact of receptacles shall be connected to a solidly grounded conduit system or to a system grounding conductor (not the system neutral) by a stranded copper wire not smaller than 12 AWG or shall be grounded in some other approved manner.
- B. Bond all metal parts. Make equipment and bus connections with suitable lugs or clamps. Cadweld all wire-to-ground rod joints. Cadweld all wire-to-wire joints size 1/0 AWG and over.
- C. Bond all conduits stubbing under switchboards, transformers and similar locations using bonding bushings. Bond each conduit separately.
- D. Provide a bonding wire from grounding bushings on all conduit terminated at panels, boxes, wireways, panels, etc.
- E. Provide a bond wire in all flexible metal conduits and connect to the boxes at each end in an approved manner.
- F. Use PVC for sleeving grounding conductors, except that where sleeves are subject to extreme injury use rigid metal conduit bonded at both ends.
- G. Ground all separately derived sources such as transformers to adjacent cold water pipe or building steel in accordance with NEC.
- H. Grounding of all equipment should be accomplished with lugs equal to T & B "Locktite" one bolt hole tongue #31003 or approved equal.
- I. All conduit to service entrance equipment and loadcenter shall have a Grounding Bushing on all conduits and ground to box, cabinet, etc. This will give an added

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protection in grounding all the electrical systems.

END OF SECTION

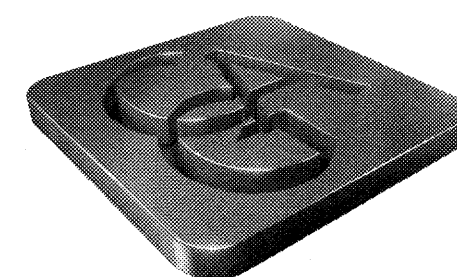
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Sheet Number	Sheet Title
000	COVER SHEET
1 OF 1	BOUNDARY & TOPOGRAPHIC SURVEY
E01	ELECTRICAL NOTES AND SPECIFICATIONS
E02	ELECTRICAL PLAN
E03	POLE DETAILS
L01	TREE DISPOSITION PLAN & NOTES



CITY OF FORT LAUDERDALE

PROJECT # 12167  
PROVIDENT PARK  
SITE LIGHTING DESIGN FOR ADDITION  
1412 NW 6th STREET  
FORT LAUDERDALE, FLORIDA

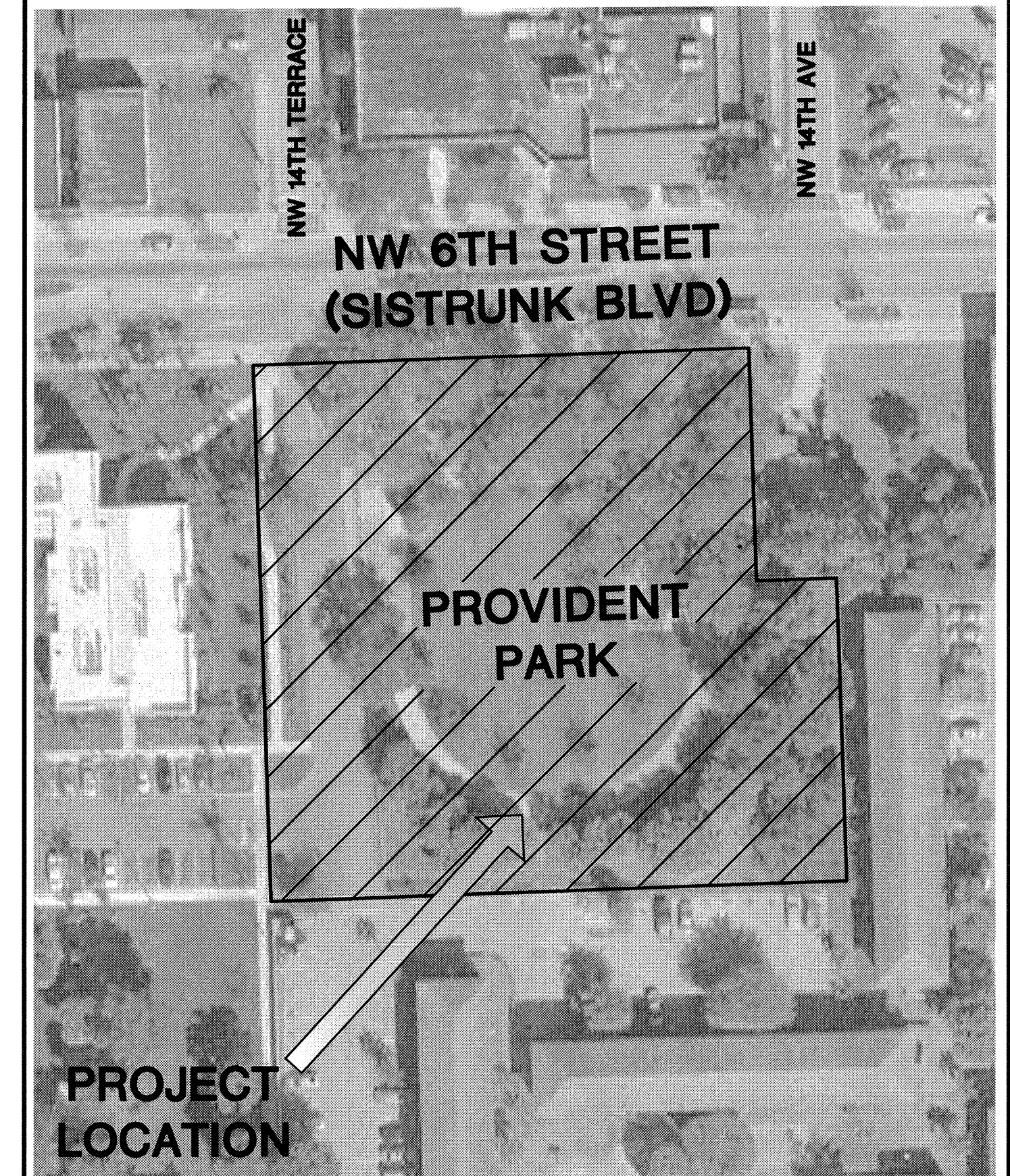
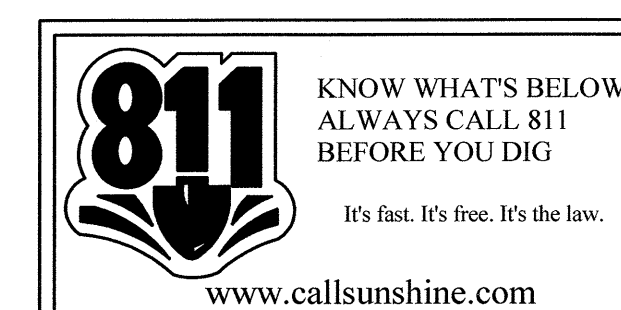
CGA PROJECT # 16-8654



**Calvin, Giordano & Associates, Inc.**  
**EXCEPTIONAL SOLUTIONS™**  
1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316  
Phone: 954.921.7781 • Fax: 954.921.8807

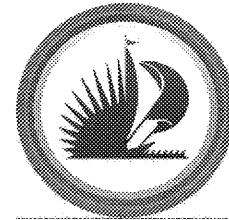
Certificate of Authorization 514 - Engineering  
Certificate of Authorization LC 00000339 - Landscape Architecture  
Certificate of Authorization LB 6751 - Surveying

Calvin, Giordano & Associates, Inc.  
Approved for Bidding  
By: *Carl M. Kasper*  
Date: 5/17/17



LOCATION SKETCH

PROJECT 12167  
PROVIDENT PARK  
SITE LIGHTING DESIGN FOR ADDITION  
1412 NW 6th STREET

 **CITY OF FORT LAUDERDALE**  
**PUBLIC WORKS DEPARTMENT**  
**ENGINEERING & ARCHITECTURE**  
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

**FORT LAUDERDALE CITY COMMISSION**

JOHN P. "JACK" SEILER	MAYOR
BRUCE G. ROBERTS	COMMISSIONER - DISTRICT I
DEAN J. TRANTALIS	COMMISSIONER - DISTRICT II
ROBERT L. MCKINZIE	COMMISSIONER - DISTRICT III
ROMNEY ROGERS	COMMISSIONER - DISTRICT IV

DANE M. ESDALLE		
CITY OF FORT LAUDERDALE	PROJECT MANAGER II	954-828-6885
MICHAEL CONNER		
CALVIN, GIORDANO AND ASSOC.	SR. LANDSCAPE ARCHITECT	954-921-7781

DATE: 5/16/17

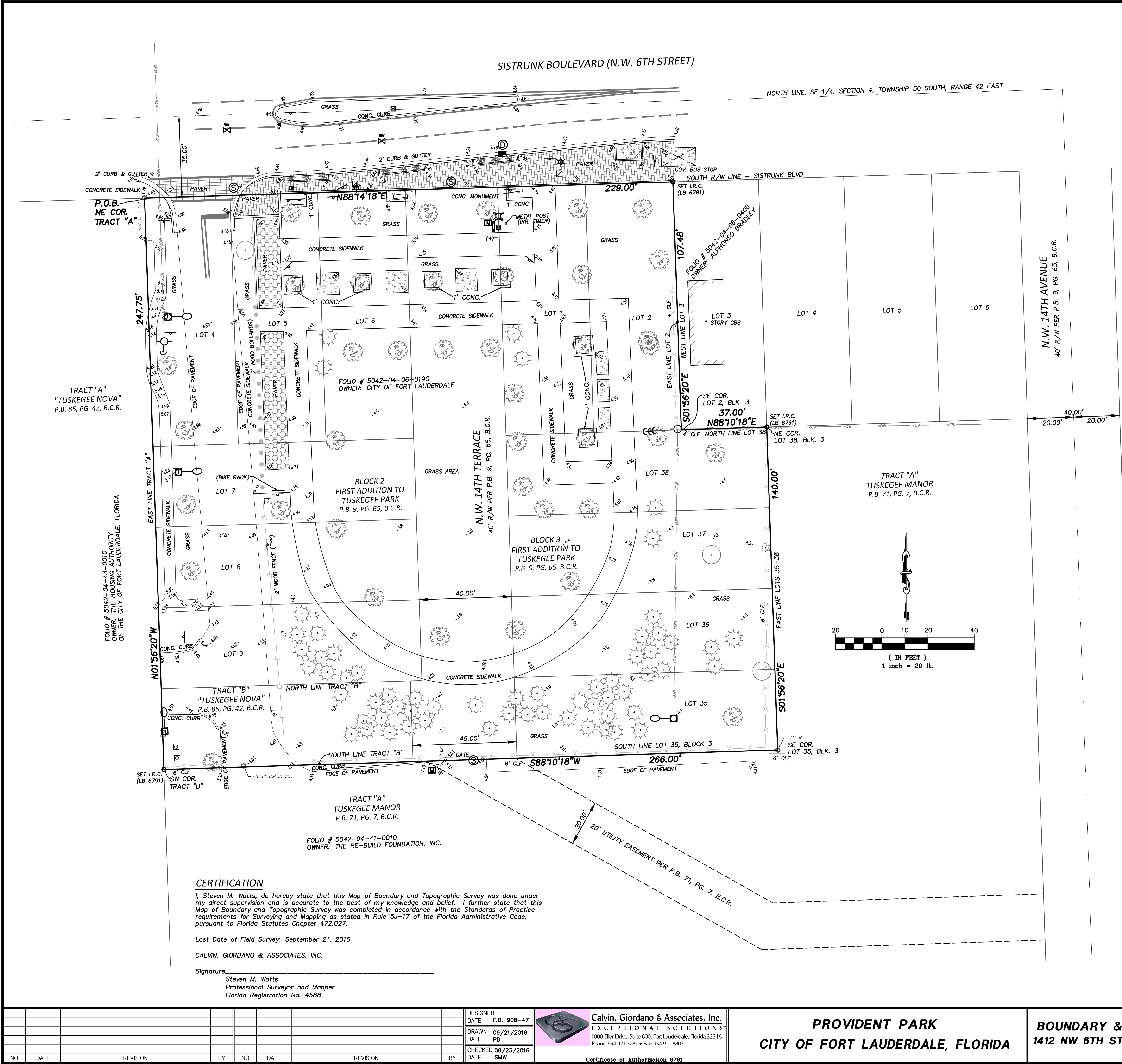
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DRAWING FILE No.: 4-140-41

**FOR BIDDING**



File Name: P:\Projects\2016\188654 Provident Park - Site Lighting Design For Addition\Survey\SKETCH\16-8654-V-TS-Provident Park.dwg - (Plotted by: Katharine Kupsky on Tuesday, May 16, 2017 10:10:33 AM)



LEGAL DESCRIPTION

A parcel of land being all of Tract "B", "TUSKEGEE NOVA" according to the plat thereof, as recorded in Plat Book 85, Page 42, of the Public Records of Broward County, Florida, being a portion of Lots 1 and 2, Block 3, a portion of Lots 4, 5 and 6, Block 2, all of Lots 7, 8 and 9, Block 2, and all of Lots 35, 36, 37 and 38, Block 3, FIRST ADDITION TO TUSKEGEE PARK, according to the plat thereof, as recorded in Plat Book 9, Page 65, of the Public Records of Broward County, Florida, said parcel being more particularly describe as follows:

BEGIN at the Northeast corner of Tract "A", of said "TUSKEGEE NOVA", said point also being on the South right-of-way line of Sistrunk Boulevard (N.W. 6th Street);

THENCE N 88°14'18" E along the said South right-of-way line of Sistrunk Boulevard a distance of 229.00 feet to a point on the East line of said Lot 2, Block 3, FIRST ADDITION TO TUSKEGEE PARK;

THENCE S 01°56'20" E along the said East line of Lot 2, Block 3, a distance of 107.48 feet to the Southeast corner of said Lot 2, Block 3, said point also being on the North line of said Lot 38, Block 3;

THENCE N 88°10'18" E along the said North line of Lot 38, Block 3 a distance of 37.00 feet to the Northeast corner of said Lot 38, Block 3;

THENCE S 01°56'20" E along the East line of said Lots 35, 36, 37 and 38, Block 3 a distance of 140.00 feet to the Southeast corner of said Lot 35, Block 3;

THENCE S 88°10'18" W along the South line of Lot 35, Block 3 and the South line of said Tract "B", "TUSKEGEE NOVA", a distance of 266.00 feet to the Southwest corner of said Tract "B", said point also being on the East line of said Tract "A", "TUSKEGEE NOVA"

THENCE N 01°56'20" W along the said East line of Tract "A", a distance of 247.75 feet to the POINT OF BEGINNING.

Said parcel situate within the City of Fort Lauderdale, Broward County, Florida containing 61, 884 square feet, more or less.

SYMBOL LEGEND

- +— = SIGN
- X— = WATER VALVE
- [ ]— = IRRIGATION VALVE
- [X]— = FIRE HYDRANT
- [M]— = WATER METER
- [B]— = BACKFLOW PREVENTOR\CHECK VALVE
- [E]— = ELECTRIC HANDHOLE
- [S]— = SANITARY MANHOLE
- [O]— = WOOD POWER POLE
- [C]— = CATCH BASIN
- [T]— = TELEPHONE HANDHOLE
- [BOLLARD]— = BOLLARD
- [ELECTRIC METER\RAK]— = ELECTRIC METER\RAK
- [FPL TRANSFORMER PAD]— = FPL TRANSFORMER PAD
- [GUY ANCHOR]— = GUY ANCHOR
- [DRAINAGE MANHOLE]— = DRAINAGE MANHOLE
- [TRAFFIC SIGNAL HANDHOLE]— = TRAFFIC SIGNAL HANDHOLE
- [CROSS WALK SIGNAL POLE]— = CROSS WALK SIGNAL POLE
- [COLUMN]— = COLUMN
- [FOUND PROPERTY CORNER]— = FOUND PROPERTY CORNER
- [CONC. POWER POLE]— = CONC. POWER POLE
- [FIBER OPTIC]— = FIBER OPTIC
- [LAMP POST]— = LAMP POST
- [CLEANOUT]— = CLEANOUT
- [FENCE]— = FENCE
- [OVERHEAD ELECTRIC]— = OVERHEAD ELECTRIC
- [METAL LIGHT POLE]— = METAL LIGHT POLE
- [SPOT ELEVATION (NAVD88)]— = SPOT ELEVATION (NAVD88)
- [ELECTRICAL SERVICE]— = ELECTRICAL SERVICE

ABBREVIATIONS

- CONC. = CONCRETE
- CATV = CABLE TELEVISION
- D.B. = DEED BOOK
- P.B. = PLAT BOOK
- PG. = PAGE
- B.C.R. = BROWARD COUNTY RECORDS
- M.D.C.R. = MIAMI DADE COUNTY RECORDS
- LB = LICENSED BUSINESS
- PSM = PROFESSIONAL SURVEYOR & MAPPER
- R/W = RIGHT-OF-WAY
- N&D = NAIL AND DISK
- F.D.O.T. = FLORIDA DEPARTMENT OF TRANSPORTATION
- S.R. = STATE ROAD
- C.B.S. = CONCRETE BLOCK W STUCCO
- W = WITH
- COL. = COLUMN
- BLDG. = BUILDING
- C&G = CURB & GUTTER
- ALUM. = ALUMINUM FENCE
- PRM = PERMANENT REFERENCE MONUMENT
- E-O-P = EDGE-OF-PAVEMENT
- FPL = FLORIDA POWER & LIGHT
- O.R.B. = OFFICIAL RECORDS BOOK
- NAVD88 = NORTH AMERICAN DATUM OF 1988
- CLF = CHAIN LINK FENCE
- TC = TITLE COMMITMENT
- IP = IRON PIPE
- IR = IRON ROD
- IRC = IRON ROD & CAP
- FND. = FOUND
- GRAV. = GRAVEL
- Q = CENTERLINE
- P.O.B. = POINT OF BEGINNING
- P.O.C. = POINT OF COMMENCEMENT
- COR. = CORNER
- COV. = COVERED

BOUNDARY & TOPOGRAPHIC SURVEY NOTES:

- Calvin, Giordano & Associates. did not research title for this property and the plats, rights-of-way, and easements as shown hereon are per the Public Records of Broward County, Florida via the Broward County Property Appraiser's and Clerk of the Court's web sites.
- The purpose of this Map Survey is to prepare a Boundary and Topographic Survey of the parcels of land known as Provident Park, as described under Broward County Folio Number: 5042-04-06-0190, all above ground improvements within the site have been located and shown hereon.
- Not valid without the signature and original raised seal of a Florida Professional Surveyor & Mapper.
- Underground improvements and/or encroachments were not located as part of this survey task.
- Unless otherwise noted hereon, record and measured values are in substantial agreement.
- This survey is classified as commercial/high risk and exceeds the minimum relative distance accuracy of 1 foot in 10,000 feet as required by the Standards of Practice requirements for Surveying and Mapping in the State of Florida (Chapter 5J-17.050 through 5J-17.052 F.A.C.), the accuracy obtained by measurement and calculation of a closed geometric figure was found to exceed this requirement.
- The horizontal features shown hereon are plotted to within 1/20 of the map scale.
- Horizontal and vertical data shown hereon was obtained utilizing a "TOPCON ES-105" Total Station and "TDS-NOMAD" Data Collection System.
- Bearings shown hereon are assumed and referenced to the East line of Tract "A", "TUSKEGEE NOVA", as recorded in Plat Book 85, Page 42, B.C.R., have a bearing of N 01°56'00" E.
- Horizontal feature location is to the center of the symbol and may be enlarged for clarity.
- The elevations shown hereon are based on North American Vertical Datum of 1988 (NAVD88) and referenced to the City of Fort Lauderdale Bench Mark Number: BM17, Elevation= 5.11' (NAVD88), (Published as 6.68' NGVD29); being PK Nail in Brass Disc stamped City of Fort Lauderdale NW17, located at the top of curb northwest corner of NW 6th St. and NW 14th Ave.
- Flood Zone Information  
Flood Zone: X  
Community Number: 125105 City of Fort Lauderdale  
Panel Number: 0368  
Map Number: 12011C0368  
Suffix: H  
Dated: 08-18-2014

CERTIFICATION

I, Steven M. Watts, do hereby state that this Map of Boundary and Topographic Survey was done under my direct supervision and is accurate to the best of my knowledge and belief. I further state that this Map of Boundary and Topographic Survey was completed in accordance with the Standards of Practice requirements for Surveying and Mapping as stated in Rule 5J-17 of the Florida Administrative Code, pursuant to Florida Statutes Chapter 472.027.

Last Date of Field Survey: September 21, 2016

CALVIN, GIORDANO & ASSOCIATES, INC.

Signature: Steven M. Watts  
Professional Surveyor and Mapper  
Florida Registration No. 4588

Calvin, Giordano & Associates, Inc.  
EXCEPTIONAL SOLUTIONS  
1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316  
Phone: 954-921-7781 • Fax: 954-921-8807

Certificate of Authorization 8791

PROVIDENT PARK  
CITY OF FORT LAUDERDALE, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY  
1412 NW 6TH STREET, FORT LAUDERDALE, FL

SEAL  
NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR & MAPPER

STEVEN M. WATTS  
PSM NO. 4588

SCALE  
1" = 20'

PROJECT No  
16-8654

CAD FILE

SHEET:  
1

CAN 17-1292  
Exhibit 3  
OF 1322



- ALL ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, N.E.C., NATIONAL FIRE PROTECTION ASSOCIATION, AND SHALL COMPLY WITH ALL LOCAL, STATE & FEDERAL RULES, REGULATIONS AND ORDINANCES.
- MINIMUM WIRE SIZE SHALL BE 12 AWG EXCLUDING CONTROL WIRING UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE COPPER WITH THWN/THHN OR XHHW STRANDED INSULATION, UNLESS OTHERWISE NOTED.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS. CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- DISCONNECT SWITCHES SHALL BE 600 VOLT H.P. RATED, HEAVY-DUTY, QUICK MAKE, QUICK-BREAK NEMA 3R ENCLOSURES UNLESS OTHERWISE NOTED. ENGRAVED LAMINATED PLASTIC IDENTIFICATION PLATES SHALL BE FURNISHED AND INSTALLED ON ALL DISCONNECT SWITCHES, CONTACTORS AND STARTERS.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE CURRENT EDITION OF THE N.E.C.. A SEPARATE GROUNDING CONDUCTOR SHALL BE INSTALLED IN EVERY CONDUIT AND RACEWAY AND SECURELY BONDED IN AN APPROVED GROUNDING TERMINAL AT BOTH ENDS OF THE RUN. THE GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 250-122 OF THE N.E.C..
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR THE COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL HARDWARE NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ALL EXPOSED ELECTRICAL CONDUIT TO BE GALVANIZED RIGID STEEL CONDUIT OR SCHEDULE 80 PVC UNLESS OTHERWISE NOTED. ALL OTHER RACEWAYS TO COMPLY WITH GOVERNING CODES. WHERE RIGID STEEL IS USED, IT SHALL BE COMPLETELY COATED WITH AN ALKALI AND RUST RESISTANT BITUMASTIC PAINT, COPPER NO. 50, AND THREADS SHALL BE COATED WITH ZINC CHROMATE.
- ALL UNDERGROUND ELECTRICAL CONDUITS TO BE P.V.C. SCHEDULE 40 AND MINIMUM 1" SIZE.
- CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY DAMAGED IRRIGATION LINES WHILE TRENCHING OR BORING.
- ALL MATERIALS SHALL BE NEW, U.L. LISTED AND APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) / BUILDING DEPARTMENT.
- THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY THE PROJECT ENGINEER OF RECORD.
- GUARANTEE ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM THE DATE OF ACCEPTANCE.
- VERIFY THE LOCATION OF ALL EXISTING AND PROPOSED ELECTRICAL WORK AND REPORT ANY DISCREPANCIES TO THE PROJECT ENGINEER OF RECORD PRIOR TO STARTING WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTINGS.
- ALL CIRCUIT BREAKERS, TWO AND THREE POLE, TO BE THERMAL MAGNETIC, COMMON TRIP. NO TIE HANDLES OR TANDEMS WILL BE ACCEPTED.
- ALL FUSES, UNLESS NOTED OTHERWISE, SHALL BE CURRENT LIMITING, TIME DELAY FUSES RATED FOR 200,000 A.I.C.. ALL FUSES FOR SAFETY SWITCHES SHALL BE DUAL ELEMENT, CARTRIDGE TYPE. FUSES SHALL BE THOSE MANUFACTURED BY EITHER BUSSMAN OR LITFUSE. THE CONTRACTOR SHALL FURNISH TO THE OWNER ONE SPARE FUSE FOR EACH SIZE AND TYPE OF FUSE INSTALLED. FUSES 600 AMPS OR LESS SHALL BE CLASS RK1, TYPICAL UNLESS OTHERWISE NOTED. FUSES OVER 600 AMPS SHALL BE CLASS L.
- PULL BOX: POLYMER CONCRETE (BODY AND COVER) WITH BOLTED COVER BY QUAZITE, SYNTERTECH, BROOKS OR APPROVED EQUAL.
- ALL CONDUCTOR SPLICES SHALL UTILIZE THE SUBMERSIBLE-TYPE, U.L. LISTED CONNECTORS UNLESS OTHERWISE NOTED.
- CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:

<u>20BV SYSTEM</u>	<u>480V SYSTEM</u>	<u>PHASE SEQUENCE</u>
NEUTRAL - WHITE	NEUTRAL - WHITE/STRIPE	ABC: TOP TO BOTTOM
PHASE A - BLACK	PHASE A - BLACK	LEFT TO RIGHT, FRONT
PHASE B - RED	PHASE B - RED	TO BACK
PHASE C - BLUE	PHASE C - YELLOW	
GRD.CON - GREEN	GRD.CON - GREEN	
- CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF CONTRACT DRAWINGS AT JOB SITE WITH COLORED MARKINGS INDICATING PROGRESS OF WORK. THIS SET OF CONTRACT DRAWINGS IS TO BE SEPARATE FROM, AND IN ADDITION TO, CONTRACTOR'S CONSTRUCTION SET. EVERY UNIT OF EQUIPMENT, DEVICE, CONDUIT AND WIRE IS TO BE MARKED WHEN INSTALLED. USE GREEN TO INDICATE INSTALLATION AS SHOWN ON DRAWINGS AND USE RED TO INDICATE FIELD CHANGES. UPON COMPLETION OF WORK, THIS SET OF CONTRACT DRAWINGS IS TO BE TURNED OVER TO, AND BECOME PROPERTY OF THE ELECTRICAL ENGINEER.
- IF ELECTRICAL CONTRACTOR HAS QUESTIONS, OR IN THEIR OPINION FINDS OMISSIONS OR ERRORS ON ELECTRICAL DOCUMENTS, IT IS THEIR RESPONSIBILITY TO BRING THIS TO THE ATTENTION OF THE ELECTRICAL ENGINEER IMMEDIATELY. IF ELECTRICAL CONTRACTOR PROCEEDS WITH ANY CHANGES TO THE CONTRACT DOCUMENTS, WITHOUT WRITTEN PRIOR APPROVAL FROM THE ELECTRICAL ENGINEER, CONTRACTOR WILL NOT BE COMPENSATED.

1. PANELBOARDS:  
SQUARE D OR APPROVED EQUAL.  
DEAD-FRONT, THERMAL MAGNETIC BOLT-ON TYPE CIRCUIT BREAKERS WITH MASTER KEYED LOCK DOOR. SINGLE POLE CIRCUIT BREAKERS SHALL BE U.L. LISTED WITH SWITCHING DUTY RATING (SWD) AT 120V (OR 277V FOR 480V-3PH SYSTEMS).  
MINIMUM FAULT CURRENT RATING: 22,000 AMPS.  
BOARD PANEL SIZE: SEE PANEL SCHEDULE.
2. PROVIDE TYPEWRITTEN SCHEDULES FOR ALL PANELBOARDS AND NAME PLATES FOR ALL ELECTRICAL EQUIPMENT.



1. BOTTOM OF ALL ELECTRICAL EQUIPMENT TO BE AT A MINIMUM OF ONE (1) FOOT ABOVE 100 YEAR FLOOD ELEVATION AS PER CITY OF FT. LAUDERDALE ORDINANCE ARTICLE II SEC. 14-10 AND 14-17.4. THE BROWARD COUNTY 100 YEAR FLOOD ELEVATION VARIES FROM 5.50 TO 6.50 FEET NAVD WITHIN THE PROJECT LIMITS. THE FEMA BASE FLOOD ELEVATION VARIES FROM 5.00 TO 6.00 FEET NAVD WITHIN THE PROJECT LIMITS.
- 2.. FOUNDATION/FOOTER DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED WIND LOAD CALCULATIONS FROM A STRUCTURAL ENGINEER LICENSED IN THE STATE OF FLORIDA.



SHEET NO.	OF
E01	3
TOTAL:	6
CAD FILE: 12167-E01-PLAN	
DRAWING FILE NO. 4-140-432	

PROJECT # 12167  
PROVIDENT PARK  
SITE LIGHTING DESIGN  
ELECTRICAL NOTES  
FORT LAUDERDALE, FLORIDA

ELEVATIONS SHOWN HEREON ARE  
BASED ON THE NORTH AMERICAN  
VERTICAL DATUM 1988 (NAVD 1988)



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PANEL SCHEDULE "SP"											
RATED VOLTAGE:			1 PH, 3 W			MANUFACTURE SQUARE D - HOM30M150RB			MOUNTING: SURFACE		
RATED AMPS (CU BUSS):			SPACES: 30			LOCATION: EQUIPMENT RACK			TYPE: NEMA 3R		
MAIN:			BUSS: COPPER			PROJECT: 16-8654			A.I.C. 22,000		
CKT	CIRCUIT DESIGNATION	O.C.P.	AWG/COND.	kVA			RCPT	kVA			CKT
				CONT. LOAD	FULL LOAD			CONT. LOAD	FULL LOAD	AWG/COND.	
1	PROP. LIGHT POLES 13, 14, 15, 16, & 17 (NOTE 5, 7)	20-2P	2#12 / 1"	0.21				0.25		2#12 / 1"	20-2P
3				0.21				0.25			4
5	PROP. LIGHT POLES 7, 8, 9, 10, 11, & 12 (NOTE 5, 7)	20-2P	2#12 / 1"	0.29				0.90		2#10 / 1"	6
7				0.29				1.10		2#10 / 1"	8
9	PROP. RECEPTACLES 7, 8, 9, 10, 11, & 12 (NOTE 5, 7)	20-1P	2#6 / 1" GFCI	1.30				2.00		2#12 / 1"	10
11	SPACE										12
13	SPACE										14
15	SPACE										16
17	SPACE										18
19	SPACE										20
21	SPACE										22
23	SPACE										24
25	SPACE										26
27	SPACE										28
29	SPACE										30
SUBTOTAL CONNECTED LOAD:				0.0	2.3	0.0		0.0	4.5	0.0	
				: SUBTOTAL CONNECTED LOAD							
CONNECTED LOAD				6.8	CONTINUOUS & LARGEST MOTOR @ 25%:			1.7	NOTE 1: VERIFY MAX OCPD WITH NAMEPLATE		
TOTAL RECEPTACLE LOAD:				0.0	CONNECTED MOTOR / FULL LOADS @ 100%:			0.0	NOTE 2: LOCKABLE CIRCUIT BREAKER		
TOTAL CONTINUOUS LOAD:				6.8	CONNECTED CONTINUOUS LOAD @100%:			6.8	NOTE 3: NON-CONCURRENT LOAD		
TOTAL FULL LOAD:				0.0	RECEPTACLE COMPUTED LOAD:			0.0	NOTE 4: GFCI TYPE CIRCUIT BREAKER		
					TOTAL COMPUTED LOAD:			8.50 kVA	NOTE 5: PHOTOCELL CONTROLLED		
								17.71 AMPS	NOTE 6: TIMESWITCH CONTROLLED		
									NOTE 7: FED THRU LIGHTING CONTACTOR		

SHORT CIRCUIT CALCULATIONS

FAULT CURRENT AT EXISTING FPL TRANSFORMER  
SECONDARY SIDE AS PER FPL'S FAULT CURRENT LETTER  
Is.c. sym = 21,110 AMPS @ 240 VOLTS 1 PHASE  
BASIC POINT TO POINT METHOD CALCULATION:  
Is.c. sym = 21,110 A  
PHASE CONDUCTOR = 1/0 AWG  
# OF CONDUCTORS PER PHASE (N) = 1  
LENGTH (L) = 30 FEET  
PHASE CONDUCTOR CONSTANT (C) = 9,317  
LINE TO LINE VOLTAGE (EL-L) = 240 V  
'f' FACTOR:  
 $f = \frac{2 \times L \times I_{sc} \times 10^{-3}}{N \times C \times E_{sc}} = 0.5664376$   
MULTIPLIER:  
 $M = \frac{1}{1 + f} = 0.638391$   
FAULT CURRENT AT SERVICE EQUIPMENT:  
 $F.C. = I_{sc} \times M \times 10^3$   
 $F.C. = 13,476.4 \text{ A}$

SERVICE LOAD CALCULATIONS

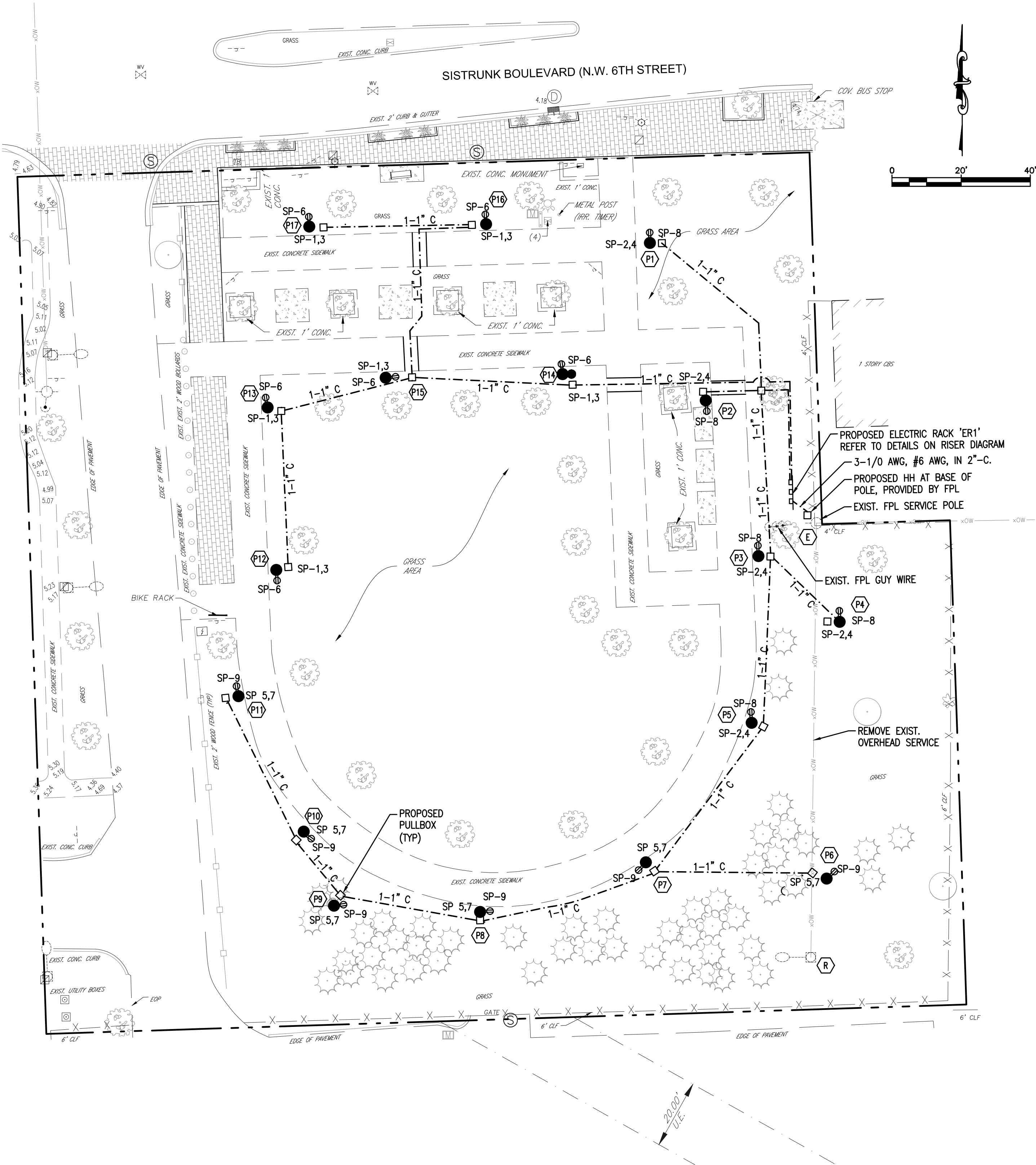
PROPOSED PARK LIGHTING:  
17 FIXTURES X 0.41 VA / FIXTURE = 6.97 VA  
TOTAL LIGHTING LOAD 7.0 VA  
LIGHTING LOAD 7.0 VA / 240 V X 125% = 0.04 A  
OTHER CONTINUOUS LOADS 3,250 VA / 240 V X 125% = 16.94 A  
TOTAL LOAD PANEL "SP" IS < 18 AMPS  
THE PROPOSED SERVICE CONSISTS OF 1 SET OF 3-#1/0AWG WHICH IS RATED FOR 150 AMPS

**WARNING**  
Arc Flash and Shock Hazard  
Appropriate PPE Required

NOTE:  
IN ACCORDANCE WITH NFPA 70E, PARAGRAPH 130.3.A.1, ARC FLASH HAZARD ANALYSIS WAS NOT PERFORMED. THE ARC FLASH PROTECTION BOUNDARY SHALL BE 4.0 FEET BASED ON CLEARING TIME OF 2 CYCLES (0.033 SEC.) AND THE AVAILABLE FAULT CURRENT **21,110 RMS SYMMETRICAL AMPERES.**

SITE - ELECTRICAL NOTES

- FOR CONDUIT CROSSING UNDER EXIST. PAVEMENT: USE DIRECTIONAL BORING.
- FOR ALL UNDERGROUND SPLICES USE SUBMERSIBLE-TYPE SPLICE CONNECTORS BY GREAVES (BLACK-BURY), NSI (BLUE-POLARIS), OR APPROVED EQUAL.
- PROVIDE PULL-STRINGS INSIDE ANY AND ALL VACANT/SPARE CONDUITS AND APPLY DUCT-SEAL AT ALL CONDUIT ENDS.
- ALL EXISTING UNDERGROUND UTILITY LINES (FPL, WATER, SEWER, AT&T, CATV, ETC.) MUST BE LOCATED PRIOR TO ANY EXCAVATION.
- STAKE-OUT / MARK ALL PROPOSED POLE LOCATIONS PRIOR TO PLACEMENT AND VERIFY LOCATIONS ARE ACCEPTABLE TO PROJECT MANAGER AND ENGINEER OF RECORD. IF CONTRACTOR FAILS TO COORDINATE THE POLES LOCATIONS AS STATED ABOVE, ANY SUBSEQUENTLY REQUIRED RELOCATION(S) WILL BE AT THE CONTRACTOR'S EXPENSE.
- ELECTRICAL CIRCUITING PATH IS SCHEMATIC. CONDUIT ROUTING SHALL FOLLOW THE DRAWING AS CLOSELY AS POSSIBLE AND GENERALLY CONFORM TO THE PATHWAY TO AVOID DAMAGE TO EXISTING TREE ROOTS AND UNDERGROUND FACILITIES. IF MAJOR ROOTS OR OTHER CONFLICTS ARE ENCOUNTERED, CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER PRIOR TO TRENCHING.
- PROVIDE IDENTIFICATION FOR ALL PANELS, CABINETS, ENCLOSURES, DISCONNECTS & TRANSFORMERS USING ENGRAVED NAMEPLATES, WHITE LETTERING ON A BLACK BACKGROUND. NAMEPLATES SHALL IDENTIFY EQUIPMENT DESIGNATION (NAME), VOLTAGE, PHASE & WIRE CONFIGURATION, AND AMPERAGE RATING. PROVIDE TYPEWRITTEN DIRECTORIES UNDER PLASTIC COVER FOR ALL PANEL BRANCH CIRCUITS, CLEARLY INDICATING AREA AND TYPE OF LOAD SERVED BY EACH BRANCH CKT PROTECTIVE DEVICE, INCLUDING SPARES. HAND PRINTED WILL NOT BE ACCEPTED.

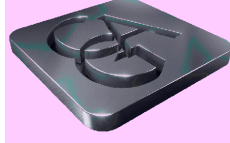


SITE PLAN

Scale: 1" = 20'

LEGEND

- PROPERTY LINE
- PROPOSED LIGHT POLE
- ⊕ PROPOSED 120V, 20A, POLE-MOUNTED RECEPTACLE AND SPARE CONDUIT STUBBED-UP AND CAPPED ON SIDE OF POLE. REFER TO ELEC. NOTES & DETAILS SHEET.
- ⬡ POLE { E = EXISTING POLE (1)  
P# = PROPOSED POLE (17)  
R = REMOVE POLE (1)
- PULLBOX
- - - - - PROPOSED ELECTRICAL
- - - - - CONDUIT CROSSING (DIRECTIONAL BORE)
- ▒ EXISTING PAVERS
- EXISTING TREES



**Calvin, Giordano & Associates, Inc.**  
EXCEPTIONAL SOLUTIONS®  
1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316  
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Certificate of Authorization 514

ENGINEER: ROUSH, P.E.  
ROBERT ROUSH  
DATE: 5/16/17

DRAWN BY: KK  
DESIGNED BY: JJ  
CHECKED BY: RR  
FIELD BOOK:

CITY OF FORT LAUDERDALE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING & ARCHITECTURE  
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS		DESCRIPTION	
NO.	DATE	BY	CHK'D

PROJECT # 12167  
PROVIDENT PARK  
SITE LIGHTING DESIGN FOR ADDITION  
ELECTRICAL PLAN  
FORT LAUDERDALE, FLORIDA

SHEET NO.		OF	
E02		3	
TOTAL:		6	
CAD FILE:			
12167-E02-PLAN			
DRAWING FILE NO.			
4-140-4122			

FOR BIDDING



P:\PROJECTS\2016\166654 PROVIDENT PARK -- SITE LIGHTING DESIGN FOR ADDITION\CADD FILES\DRAWINGS\12167-E03-DET1.DWG    Wednesday, May 17, 2017 3:12:27 PM

HAPCO POLE  
RSA ROUND STRAIGHT ALUMINUM POLE

RSA20C6-4

CATALOG NUMBER

FRESH

**Pole**

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B621. The shaft assembly shall be full-length heat treated after laser weld to produce a T6 temper.

**Handhole**

Reinforced, 3" x 6" curved Cast Aluminum Frame (Alloy 360-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Mounting Designation**

**Side Drill Mount -** For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

270°

100°

90°

0°

Handhole

**Tension Mount**

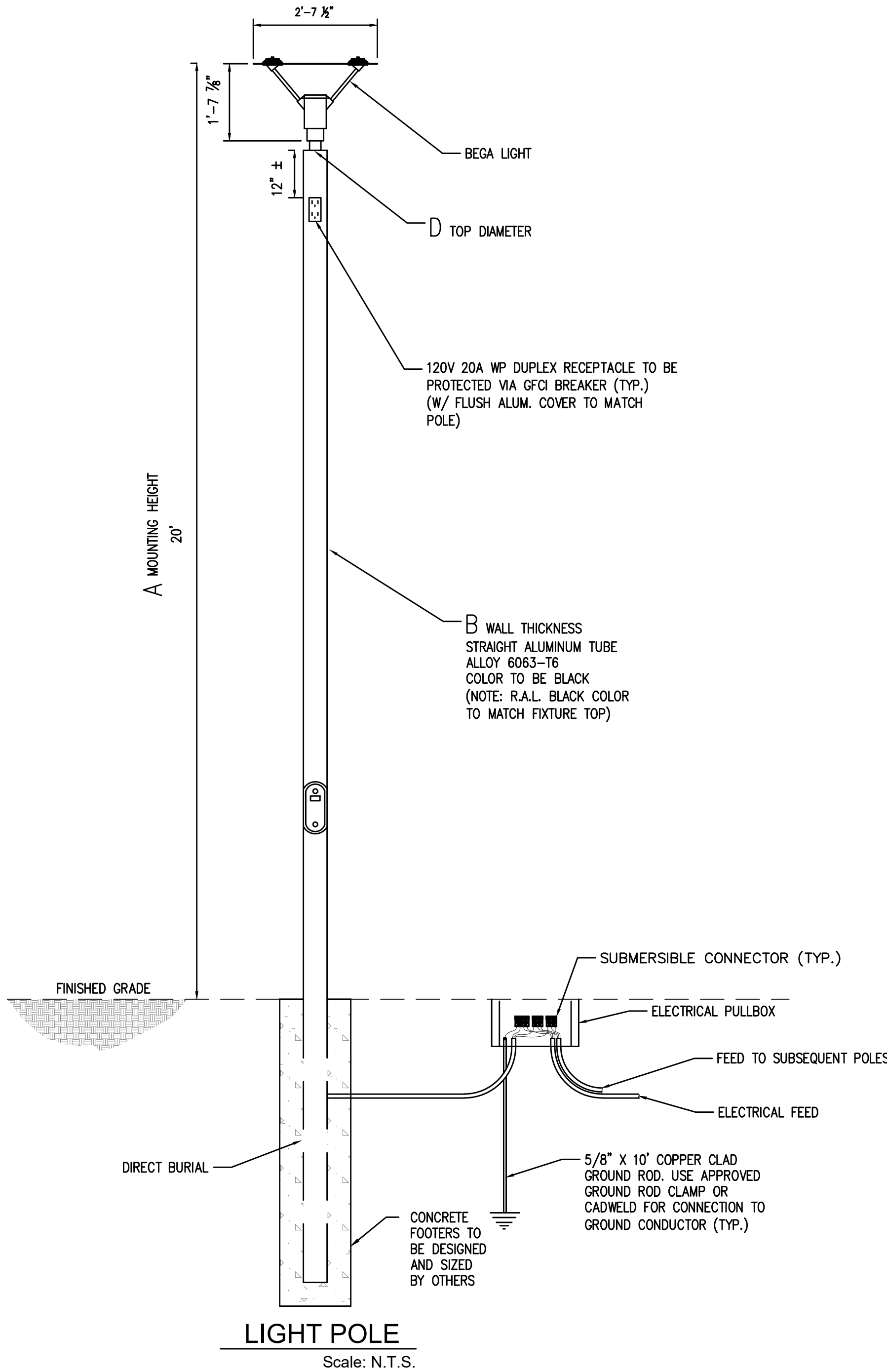
For Tension Mount applications specify both Tension diameter (2.375", 2.675", 3.5", etc.) and length (3", 4", etc.).

EPA Notes: Effective Projected Area (EPA) is square feet. EPA's calculated using meter reflectivity (mpv) indicated in accordance with 2009 ASHRAE L15-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

A	B	C	MAXIMUM EPA				D	CATALOG NUMBER	
Wt. Ref.	WALL THICKNESS	BUTT DIMENSION	60	100	110	120	130	CLG. NUMBER	
20	0.156"	6	100	12.8	10.2	9.4	7.6	6.4	55-002
									RSA20C6-4-4*

C	D	F	G	H	I
BUTT DIA.	TOP DIA.	BUTT CH. DIA.	BUTT SL. DIA.	BUTT PERI.	BUTT SIZE
6	6	9 - 10	9.75	2.75	.75 x 30 x 3

Dimensioned in Inches



NOTE:

CONTRACTOR SHALL SUBMIT SIGNED AND SEALED WIND LOAD CALCULATIONS FROM A STRUCTURAL ENGINEER LICENSED IN THE STATE OF FLORIDA.

Pole top luminaires with indirect adjustable light distribution

**Housing/Fitter:** Heavy one piece die-cast aluminum optical housing with integrally cast transition "fitter" which slip fits a 3" O.D. pole top or tenon and is secured by six (6) flush, stainless steel set screws. The housing gracefully supports two (2) 1/2" diameter stainless steel struts located at 180° as well as a die-cast aluminum diffuser retaining ring. All components function and appear as a unified design. Die castings are marine grade, copper free (≤ 0.3% copper content) A380.0 aluminum alloy.

**Enclosure:** 1/2" thick, machined tempered crystal clear optical glass with a high temperature-rated one piece molded silicone rubber gasket encloses the precise, stippled pure aluminum, wide flood distribution reflector. The glass retaining ring is secured by two (2) hidden stainless steel

**Reflective disk:** 31 1/2" diameter x 1/4" thick aluminum plate secured by two (2) die-cast aluminum fixed clamping "saddles" which receive the stainless steel struts. Adjustable up to 90° in 5° increments in one direction. A 1/4" wide by 1/2" deep "drip" channel is provided around the edge of the underside disk.

**Electrical:** 36-W LED luminaire, 43 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 80 CRI. Available in 4000K (80 CRI); add suffix 'K' to order.

**Notes:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK), White (WHIT), Bronze (BRZ), Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CBA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 33 lbs.

Effective Projection Area (EPA): 3.2 ft²

Luminaire Lumens: 1742  
Tested in accordance with LM-79-08

Lamp	LED	A	B
77 208	36-W LED	L2-S	31% 19%

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805)684-0533 FAX (805)666-9474 www.bega-us.com  
©copyright: BEGA-US 2016 Updated 09/16

Catalog Number:  
77 208

Notes: EPA = 3.2  
Specify Finish

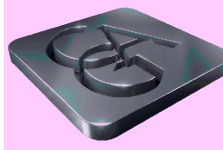
Type:

DEER16-95116

LIGHT POLE LUMINAIRES

Scale: N.T.S.

Options	Light Fixture	Pole	Supplier
1	BEGA-US CAT# 77 208	HAPCO RSA19C6-4-F6** w/GFCI Receptacle	Power and Lighting Systems, Inc. 392 SW 12th Ave. Deefield Beach, FL 33422. 954-360-7608
2	Quattro Lighting CAT# MP-TERQSP-L5-45-4000K-240-ROUNDTOP-BKTX	Quattro Lighting CAT# MP-ATP64C-20-GFCI-5"-BKTX	Lightworks, Inc. 2721 Vista Parkway, Suite C-11 West Palm Beach, FL 33411. 561-641-5570
3	Syndy symmetrical post top CAT# USY-20931-W40-01-RR-120/277-GFCI	Valmont CAT# 1708-45-80-6-T-E-P9-DBL-GFCI	Lighting Dynamics, Inc. 7835 W. Commercial Blvd. Tamarac, FL 33351. 954-944-0286



Calvin, Giordano & Associates, Inc.  
EXCEPTIONAL SOLUTIONS™  
1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316  
Phone: 954.921.7761 • Fax: 954.921.8807  
Certificate of Authorization 514

ENGINEER:  
ROBERT W. ROUSHL, P.E.  
REG. No. 20967  
DATE: 5/16/17

TEL: 954-921-7761  
FAX: 954-921-8807

DRAWN BY: KK  
DESIGNED BY: JJ  
CHECKED BY: RR  
FIELD BOOK:

DATE: 5/16/17  
SCALE: AS SHOWN

CITY OF FORT LAUDERDALE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS		DESCRIPTION
NO.	DATE	BY

PROJECT # 12167  
PROVIDENT PARK  
SITE LIGHTING DESIGN FOR ADDITION  
POLE DETAILS  
FORT LAUDERDALE, FLORIDA

SHEET NO.	OF
E03	3
TOTAL:	6
CAD FILE:	12167-E03-DET1
DRAWING FILE NO:	4-140-432

FOR BIDDING



P:\PROJECTS\2016\166654 PROVIDENT PARK - SITE LIGHTING DESIGN FOR ADDITION\CADD FILES\DRAWINGS\12167-L01-PLAN.DWG Wednesday, May 17, 2017 9:14:45 AM

TRACT "A"  
"TUSKEGEE NOVA"  
P.B. 85, PG. 42, B.C.R.

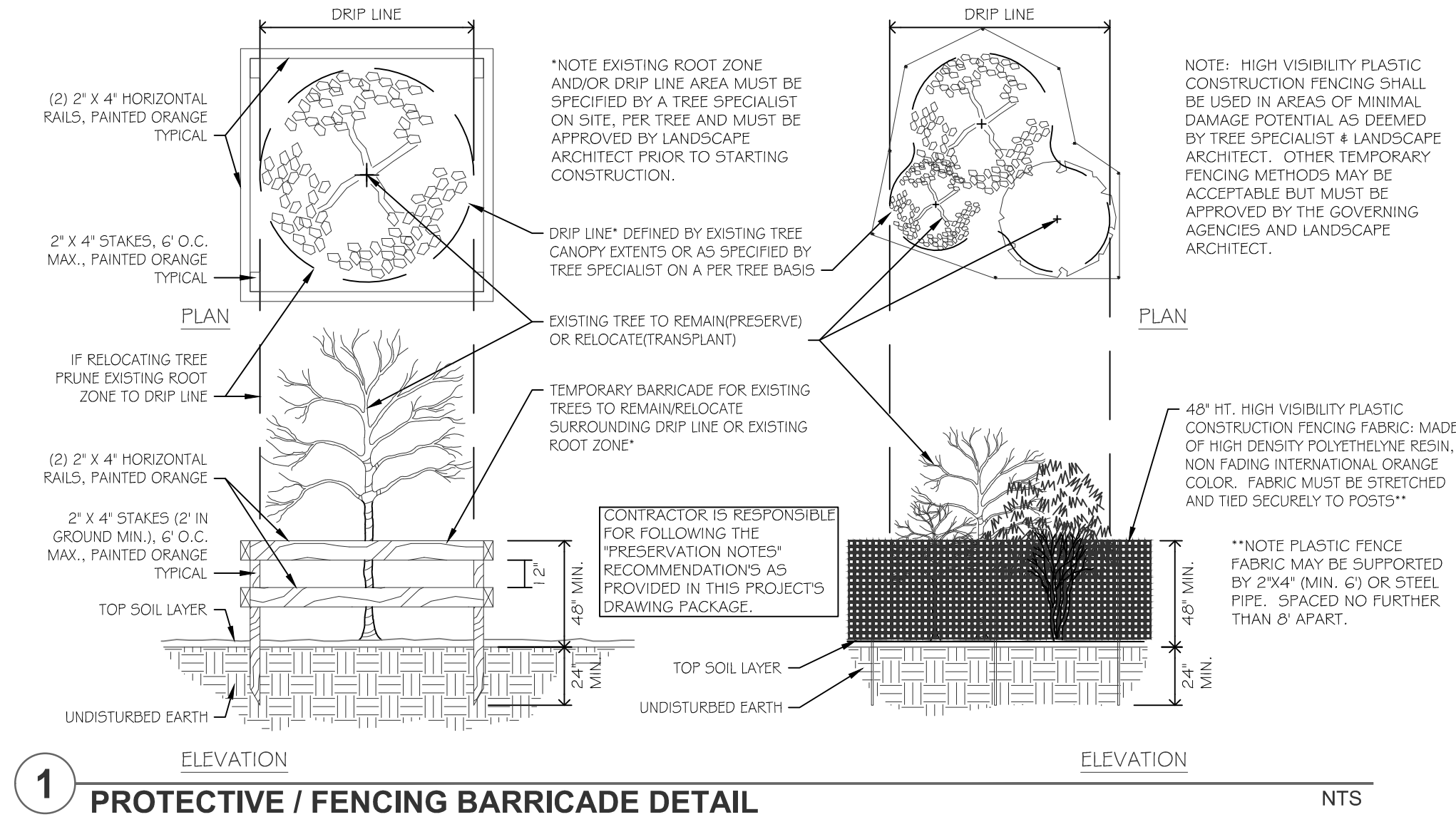
TRACT "B"  
"TUSKEGEE NOVA"  
P.B. 85, PG. 42, B.C.R.

TRACT "A"  
TUSKEGEE MANOR  
P.B. 71, PG. 7, B.C.R.

BLOCK 2  
FIRST ADDITION TO  
TUSKEGEE PARK  
P.B. 9, PG. 65, B.C.R.

BLOCK 3  
FIRST ADDITION TO  
TUSKEGEE PARK  
P.B. 9, PG. 65, B.C.R.

TRACT "A"  
TUSKEGEE MANOR  
P.B. 71, PG. 7, B.C.R.



### LANDSCAPE LEGEND

- EXISTING SABAL PALMS TO REMAIN
- EXISTING YELLOW TABEUBIA TREE TO REMAIN
- EXISTING FICUS TREE TO REMAIN
- EXISTING LIVE OAK TREES TO REMAIN
- Denotes area where branches from existing trees may need to be pruned to provide a min. 20' high clearance above new light poles. All canopy pruning shall be performed by City of Fort Lauderdale Parks Personnel. Contractor shall coordinate tree pruning with City Staff at least one (1) week prior to installing light poles. Contact Corey Callier at 954-828-5873
- Denotes area to be root pruned and excavated down 24" deep prior to installation of electrical conduit. Width of excavation area shall be min. 18" backfill with loose soil material until electrical contractor starts work. In some cases, where very large roots are encountered (greater than 6" dia), some tunneling of the conduit under the roots may become necessary.

- TREE PROTECTION FENCING
- EXISTING PAVERS

### LEGEND

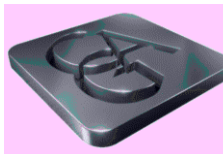
- PROPERTY LINE
- PROPOSED LIGHT POLE
- PROPOSED 120V, 20A, POLE-MOUNTED RECEPTACLE AND SPARE CONDUIT STUBBED-UP AND CAPPED ON SIDE OF POLE. REFER TO ELEC. NOTES & DETAILS SHEET.
- POLE
  - (E = EXISTING POLE
  - (P = PROPOSED POLE
  - (R = REMOVE POLE
- PULLBOX
- PROPOSED ELECTRICAL
- CONDUIT CROSSING

### PRESERVATION NOTES:

- THE OWNER OR DESIGNATED REPRESENTATIVE SHALL VERIFY THE CONDITION OF ALL EXISTING TREES ON THE SITE PRIOR TO ANY CONSTRUCTION ACTIVITY.
- PRESERVED TREES (TO REMAIN) SHALL BE BARRICADED/FENCED BEFORE AND DURING CONSTRUCTION:
  - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING ALL EXISTING VEGETATION (INCLUDING TREES, PALMS, SHRUBS & GROUND COVERS) NOTED ON PLANS.
  - THE TEMPORARY FENCING SHOWN ON PLAN(S) ARE APPROXIMATIONS ONLY. EXACT LOCATIONS FOR FENCING SHALL BE MADE IN THE FIELD BY THE OWNER'S REPRESENTATIVE OR TREE SPECIALIST IN ORDER TO DETERMINE THE ACTUAL DRIP LINE LOCATION FOR THE TREE(S). EXISTING GROUND ELEVATION AROUND DRIP LINES OF THE PRESERVED TREES WILL NOT BE CHANGED.
  - REFER TO "PROTECTIVE FENCING/BARRICADE DETAIL" ON THE STANDARD PLANTING DETAILS SHEET FOR APPROVED METHOD(S) OF BARRICADING/FENCING AND THE DRIP LINE DEFINITION.
  - IF DURING THE COURSE OF CONSTRUCTION ANY OF THE PROTECTED VEGETATION DIES, IT SHALL BE REPLACED, AS REQUIRED BY THE LOCAL JURISDICTION, BY THE CONTRACTOR WITH EQUAL SIZE AND CALIPER. WHERE SUPPLEMENTAL LANDSCAPING INFRINGES ON THIS AREA, DISTURBANCE SHALL BE MINIMIZED.
- COMPLETELY REMOVE BARRICADES WHEN CONSTRUCTION HAS PROCEEDED TO THE POINT THAT THEY ARE NO LONGER NEEDED AND WHEN APPROVED BY THE LANDSCAPE ARCHITECT.
- PROTECT ROOT ZONES OF ALL TREES AND PLANTS:
  - DO NOT ALLOW VEHICULAR TRAFFIC AND PARKING WITHIN THE FENCED AREA.
  - DO NOT STORE MATERIALS OR PRODUCTS NEAR TREES OR PLANTS.
  - PREVENT DUMPING OF REFUSE OR CHEMICALLY INJURIOUS MATERIALS OR LIQUIDS.
  - PREVENT PUDDLING OR CONTINUOUS RUNNING WATER.
  - CAREFULLY SUPERVISE ALL WORK TO PREVENT DAMAGE.

### ADDITIONAL NOTES:

- NO PULLING OR RIPPING OF EXISTING TREE ROOTS BY MECHANICAL OR TRENCHING EQUIPMENT SHALL BE ALLOWED.
- ALL CUTS SHALL BE CLEAN CUTS MADE WITH SHARP TOOLS.
- ALL WORK TO BE DONE BY A ISA CERTIFIED ARBORIST.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING IRRIGATION SYSTEM AS A RESULT OF THEIR WORK DURING CONSTRUCTION. THE CITY OF FORT LAUDERDALE DOES NOT HAVE ANY DESIGN PLANS OR AS-BUILT PLANS FOR THE IRRIGATION SYSTEM. THE CITY'S PARKS AND REC. STAFF MAY BE AVAILABLE TO TURN ON THE IRRIGATION SYSTEM, SO THAT IT MAY BE OBSERVED WHILE OPERATING. EITHER AT THE TIME OF PRE-BID MEETING OF AFTER CONTRACT AWARD. PLEASE COORDINATE IRRIGATION SITE VISIT WITH COREY CALLIER AT 954-828-5873.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REPLACING ANY DAMAGE TO THE EXISTING GRASS AS A RESULT OF THEIR WORK DURING THE COURSE OF CONSTRUCTION WITH ST. AUGUSTINE 'FLORATAM' SOD.



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Certificate of Authorization LC00000339

FOR BIDDING

PROJECT # 12167  
PROVIDENT PARK  
SITE LIGHTING DESIGN FOR ADDITION  
TREE DISPOSITION PLAN & NOTES  
FORT LAUDERDALE, FLORIDA

SHEET NO.	OF
L01	1
TOTAL:	6
CAD FILE:	12167-L01-PLAN
DRAWING FILE NO:	4-149-14322

CITY OF FORT LAUDERDALE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING & ARCHITECTURE  
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISONS	NO.	DATE	BY	CHD	DESCRIPTION

DRAWN BY:	DATE:
MAA	5/16/17
DESIGNED BY:	SCALE:
MC	AS SHOWN
CHECKED BY:	
MC	
FIELD BOOK:	

ENGINEER:  
MICHAEL CONNER  
REG. NO. 0001161  
DATE: 5/16/17

TEL: 954-921-7781  
FAX: 954-921-8807



**CITY OF FORT LAUDERDALE  
GENERAL CONDITIONS**

These instructions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Procurement Services Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement. In this general conditions document, Invitation to Bid (ITB), Request for Qualifications (RFQ), and Request for Proposal (RFP) are interchangeable.

**PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:**

- 1.01 BIDDER ADDRESS:** The City maintains automated vendor address lists that have been generated for each specific Commodity Class item through our bid issuing service, BidSync. Notices of Invitations to Bid (ITB'S) are sent by e-mail to the selection of bidders who have fully registered with BidSync or faxed (if applicable) to every vendor on those lists, who may then view the bid documents online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address or fax, please contact BidSync. If you wish purchase orders sent to a different address, please so indicate in your bid response. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 PACKING SLIPS:** It will be the responsibility of the awarded Contractor, to attach all packing slips to the OUTSIDE of each shipment. Packing slips must provide a detailed description of what is to be received and reference the City of Fort Lauderdale purchase order number that is associated with the shipment. Failure to provide a detailed packing slip attached to the outside of shipment may result in refusal of shipment at Contractor's expense.
- 1.04 PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 45 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.05 TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm net unit prices bid and shall be considered in tabulation and award of bid.
- 1.06 BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that the bid and the prices quoted in the bid will be firm for acceptance by the City for a period of one hundred twenty (120) days from the date of bid opening unless otherwise stated in the ITB.
- 1.07 VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.
- By receiving a bid, City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains material variances that, in the City's sole opinion, make that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared, by the City as conditional.
- 1.08 NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.09 MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic

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circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

#### 1.10 MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he or she will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

#### 1.11 SCRUTINIZED COMPANIES

Subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), that it is not engaged in a boycott of Israel, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2016), as may be amended or revised. 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 (2016), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), 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 (2016), as may be amended or revised.

#### 1.12 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.

### Part II DEFINITIONS/ORDER OF PRECEDENCE:

- 2.01 **BIDDING DEFINITIONS** The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:

INVITATION TO BID (ITB) when the City is requesting bids from qualified Bidders.

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REQUEST FOR PROPOSALS (RFP) when the City is requesting proposals from qualified Proposers.

REQUEST FOR QUALIFICATIONS (RFQ) when the City is requesting qualifications from qualified Proposers.

BID – a price and terms quote received in response to an ITB.

PROPOSAL – a proposal received in response to an RFP.

BIDDER – Person or firm submitting a Bid.

PROPOSER – Person or firm submitting a Proposal.

RESPONSIVE BIDDER – A person whose bid conforms in all material respects to the terms and conditions included in the ITB.

RESPONSIBLE BIDDER – A person who has the capability in all respects to perform in full the contract requirements, as stated in the ITB, and the integrity and reliability that will assure good faith performance.

FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.

SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.

CONTRACTOR – Successful Bidder or Proposer who is awarded a Purchase Order, award Contract, Blanket Purchase Order agreement, or Term Contract to provide goods or services to the City.

CONTRACT – A deliberate verbal or written agreement between two or more competent parties to perform or not to perform a certain act or acts, including all types of agreements, regardless of what they may be called, for the procurement or disposal of equipment, materials, supplies, services or construction.

CONSULTANT – Successful Bidder or Proposer who is awarded a contract to provide professional services to the City.

The following terms may be used interchangeably by the City: ITB and/or RFP; Bid or Proposal; Bidder, Proposer, or Seller; Contractor or Consultant; Contract, Award, Agreement or Purchase Order.

- 2.02 SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety,

### **PART III BIDDING AND AWARD PROCEDURES:**

- 3.01 SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidders should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Procurement Office, or other designated area, in the presence of Bidders, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.

- 3.02 MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.

- 3.03 PRICES QUOTED:** Deduct trade discounts, and quote firm net prices. Give both unit price and extended total. 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.

- 3.04 TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption **number for EIN is 59-6000319, and State Sales tax exemption number is 85-8013875578C-1.**

- 3.05 WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

- 3.06 APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in the bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in the bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.

- 3.07 MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the bidder must notify the Procurement Services Division immediately. Such notification must be received by the Procurement Services Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle the bidder to any relief from the conditions imposed in the contract.
- 3.09 SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
- 3.10 LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion that will most accurately estimate total cost of use and ownership.
- 3.11 BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.
- 3.12 USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Procurement Director reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer's response to the RFP 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 RFP and the Contract to be executed for this RFP, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the RFP purporting to require confidentiality of any portion of the Proposer's response to the RFP, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the RFP constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the city and the city's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the city's treatment of records as public records. Proposals purporting to be subject to copyright protection in full or in part will be rejected.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE RFP AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE RFP OR ANY PART THEREOF AS COPYRIGHTED.

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Exhibit 3

- 3.16 PROHIBITION OF INTEREST:** No contract will be awarded to a bidding firm who has City elected officials, officers or

employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.

- 3.17 RESERVATIONS 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.

If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder, if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.

- 3.18 LEGAL REQUIREMENTS:** Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.

- 3.19 BID PROTEST PROCEDURE: ANY PROPOSER OR BIDDER WHO IS NOT RECOMMENDED FOR AWARD OF A CONTRACT AND WHO ALLEGES A FAILURE BY THE CITY TO FOLLOW THE CITY'S PROCUREMENT ORDINANCE OR ANY APPLICABLE LAW MAY PROTEST TO THE DIRECTOR OF PROCUREMENT SERVICES DIVISION (DIRECTOR), BY DELIVERING A LETTER OF PROTEST TO THE DIRECTOR WITHIN FIVE (5) DAYS AFTER A NOTICE OF INTENT TO AWARD IS POSTED ON THE CITY'S WEB SITE AT THE FOLLOWING LINK:**  
[http://www.fortlauderdale.gov/purchasing/notices\\_of\\_intent.htm](http://www.fortlauderdale.gov/purchasing/notices_of_intent.htm)

**THE COMPLETE PROTEST ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK:**  
<http://www.fortlauderdale.gov/purchasing/protestordinance.pdf>

#### **PART IV BONDS AND INSURANCE**

- 4.01 PERFORMANCE BOND:** If a performance bond is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond, payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions as surety for faithful performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

- 4.02 INSURANCE:** If the Contractor is required to go on to City property to perform work or services as a result of ITB award, the Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Procurement Services Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an ADDITIONAL INSURED for General Liability Insurance, and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting the bid, agrees to abide by such modifications.

#### **PART V PURCHASE ORDER AND CONTRACT TERMS:**

- 5.01 COMPLIANCE TO SPECIFICATIONS, LATE DELIVERIES/PENALTIES:** Items offered may be tested for compliance

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specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidders name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

**5.02 ACCEPTANCE, CONDITION, AND PACKAGING:** The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

**5.03 SAFETY STANDARDS:** All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended, and be in compliance with Chapter 442, Florida Statutes. Any toxic substance listed in Section 38F-41.03 of the Florida Administrative Code delivered as a result of this order must be accompanied by a completed Safety Data Sheet (SDS).

**5.04 ASBESTOS STATEMENT:** All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB the bidder will supply only material or equipment that is 100% asbestos free.

**5.05 OTHER GOVERNMENTAL ENTITIES:** If the Bidder is awarded a contract as a result of this ITB, the bidder may, if the bidder has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.

**5.06 VERBAL INSTRUCTIONS PROCEDURE:** No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.

**5.07 INDEPENDENT CONTRACTOR:** The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, procurement policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.

**5.08 INDEMNITY/HOLD HARMLESS AGREEMENT:** The Contractor agrees to protect, defend, indemnify, and hold harmless the City of Fort Lauderdale and its officers, employees and agents from and against any and all losses, penalties, damages, settlements, claims, costs, charges for other expenses, or liabilities of every and any kind including attorney's fees, in connection with or arising directly or indirectly out of the work agreed to or performed by Contractor under the terms of any agreement that may arise due to the bidding process. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable Statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.

**5.09 TERMINATION FOR CAUSE:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.

**5.10 TERMINATION FOR CONVENIENCE:** The City reserves the right, in its best interest as determined by the City, to cancel contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.

**5.11 CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.

**5.12 RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records.

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accordance with generally accepted accounting practices and standards for records directly related to this contract. The Contractor agrees to make available to the City Auditor or designee, during normal business hours and in Broward, Miami-Dade or Palm Beach Counties, all books of account, reports and records relating to this contract should be retained for the duration of the contract and for three years after the final payment under this Agreement, or until all pending audits, investigations or litigation matters relating to the contract are closed, whichever is later.

- 5.13 PERMITS, TAXES, LICENSES:** The successful Contractor shall, at their own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried out under this contract.
- 5.14 LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.
- 5.15 NON-DISCRIMINATION:** There shall be no discrimination as to race, sex, color, creed, age or national origin in the operations conducted under this contract.
- 5.16 UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party of the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required prior items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:
1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
  2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
  3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve them of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying him for receiving any business from the City for a stated period of time.
- If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.
- 5.17 ELIGIBILITY:** If applicable, the Contractor must first register with the Department of State of the State of Florida, in accordance with Florida State Statutes, prior to entering into a contract with the City.
- 5.18 PATENTS AND ROYALTIES:** The Contractor, without exception, shall indemnify and save harmless the City and its employees from liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including its use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.
- 5.19 ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Commission or the City Manager or City Manager's designee, depending on original award approval.
- 5.20 LITIGATION VENUE:** The parties waive the privilege of venue and agree that all litigation between them in the state courts shall take place in Broward County, Florida and that all litigation between them in the federal courts shall take place in the Southern District in and for the State of Florida.
- 5.21 LOCATION OF UNDERGROUND FACILITIES:** If the Contractor, for the purpose of responding to this solicitation, requests the location of underground facilities through the Sunshine State One-Call of Florida, Inc. notification system or through any person or entity providing a facility locating service, and underground facilities are marked with paint, stakes or other markings within the City pursuant to such a request, then the Contractor, shall be deemed non-responsive to this solicitation in accordance with Section 2-184(5) of the City of Fort Lauderdale Code of Ordinances.

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**5.22 PUBLIC RECORDS**

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

Contractor shall:

1. Keep and maintain public records that ordinarily and necessarily would be 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 (2016), 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 contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, 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 Contract, 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 Contract, 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.

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**NON-COLLUSION STATEMENT:**

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

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

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

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

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

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

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

**NAME****RELATIONSHIPS**

-







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

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**CONTRACT PAYMENT METHOD BY P-CARD****THIS FORM MUST BY SUBMITTED WITH YOUR RESPONSE**

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to payment by credit card via MasterCard or Visa. This allows you as a vendor of the City of Fort Lauderdale to receive your payment fast and safely. No more waiting for checks to be printed and mailed.

Payments will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, firms must presently have the ability to accept credit card payment or take whatever steps necessary to implement acceptance of a credit card before the commencement of a contract.

Please indicate which credit card payment you prefer:

☐ Master Card

☐ Visa Card

Company Name:

Name (Printed)

Signature

Date:

Title

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## LOCAL BUSINESS PREFERENCE

Section 2-199.2, Code of Ordinances of the City of Fort Lauderdale, (Ordinance No. C-12-04), provides for a local business preference.

In order to be considered for a local business preference, a bidder 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 Bidder 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 bidder 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 bidder being found ineligible for the local business preference.

**THE COMPLETE LOCAL BUSINESS PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK:**

**<http://www.fortlauderdale.gov/purchasing/index.htm>**

**Definitions:** The term "Business" shall mean a person, firm, corporation or other business entity which is duly licensed and authorized to engage in a particular work in the State of Florida. Business shall be broken down into four (4) types of classes:

1. 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 and staffed with full-time employees within the limits of the City **and** shall maintain a staffing level of the prime contractor for the proposed work of at least fifty percent (50%) who are residents of the City.
2. 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 and staffed with full-time employees within the limits of the City **or** shall maintain a staffing level of the prime contractor for the proposed work of at least fifty percent (50%) who are residents of the City.
3. 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 **and** staffed with full-time employees within the limits of Broward County.
4. Class D Business – shall mean any Business that does not qualify as either a Class A, Class B, or Class C business.

## LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local BUSINESS preference classification as indicated herein, and further certifies and agrees that it will re-affirm its local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this ITB. Violation of the foregoing provision may result in contract termination.

(1)

Business Name

is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the City of Fort Lauderdale current year Business Tax Receipt and a complete list of full-time employees and their addresses shall be provided within 10 calendar days of a formal request by the City.

(2)

Business Name

is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Business Tax Receipt or a complete list of full-time employees and their addresses shall be provided within 10 calendar days of a formal request by the City.

(3)

Business Name

is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Broward County Business Tax Receipt shall be provided within 10 calendar days of a formal request by the City.

(4)

Business Name

requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

(5)

Business Name

requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

(6)

Business Name

is considered a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. and does not qualify for Local Preference consideration.

BIDDER'S COMPANY:

AUTHORIZED COMPANY PERSON:

NAME

SIGNATURE

DATE

**QUESTIONNAIRE SHEET**

PLEASE PRINT OR TYPE:

Firm Name:

President

Business Address:

Telephone:

Fax:

E-Mail Address:

What was the last project of this nature which you completed?

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The following are named as three corporations and representatives of those corporations for which you have performed work similar to that required by this contract, and which the City may contact as your references (include addresses and telephone numbers):

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How many years has your organization been in business? 

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

The name of the qualifying agent for the firm and his position is: 

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Certificate of Competency Number of Qualifying Agent:

Effective Date:

Expiration Date:

Licensed in:

Contractor's License #(s)

(County/State)

Expiration Date:

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

**Contractor must have proper licensing prior to submitting bid and must submit evidence of same with bid.**

**QUESTIONNAIRE SHEET**

1. Have you personally inspected the proposed work and have you a complete plan for its performance?

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2. Will you sublet any part of this work? If so, list the portions or specialties of the work that you will.

a)	
b)	
c)	
d)	
e)	
f)	
g)	

3. What equipment do you own that is available for the work?

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4. What equipment will you purchase for the proposed work?

	5
	6

5. What equipment will you rent for the proposed work?

	5
	6

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CITY OF FORT LAUDERDALE  
PUBLIC WORKS DEPARTMENT

MINORITY BUSINESS ENTERPRISE (MBE) - WOMEN BUSINESS ENTERPRISE (WBE)

PRIME CONTRACTOR IDENTIFICATION FORM

In order to assist us in identifying the status of those companies doing business with the City of Fort Lauderdale, this form must be completed and returned with your bid package.

Name of Firm:

Address of Firm:

Telephone Number:

Name of Person Completing  
Form:

Title:

Signature:

Date:

City Project Number:

City Project Description:

Please check the item(s) which properly identify the status of your firm:

- ☐ Our firm is not a MBE or WBE.
- ☐ Our firm is a MBE, as at least 51 percent is owned and operated by one or more socially and economically disadvantaged individuals.
- ☐ American Indian ☐ Asian ☐ Black ☐ Hispanic
- ☐ Our firm is a WBE, as at least 51 percent is owned and operated by one or more women.
- ☐ American Indian ☐ Asian ☐ Black ☐ Hispanic



### MBE/WBE CONTRACTOR INFORMATION

The City, in a continuing effort, is encouraging the increased participation of minority and women-owned businesses in Public Works Department related contracts. Along those lines, we are requiring that each firm provide documentation detailing their own programs for utilizing minority and women-owned businesses.

Submit this information as a part of this bid package and refer to the checklist, to ensure that all areas of concern are covered. The low responsive bidder may be contacted to schedule a meeting to discuss these objectives. It is our intention to proceed as quickly as possible with this project, so your cooperation in this matter is appreciated.

#### CONTRACTOR CHECKLIST

- ☐ List Previous City of Fort Lauderdale Contracts

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- ☐ Number of Employees in your firm

--Percent () Women

--Percent () Minorities

--Job Classifications of Women and Minorities

	5
	6

- ☐ Use of minority and/or women subcontractors on past projects.

	5
	6

- ☐ Nature of the work subcontracted to minority and/or women-owned firms.

	5
	6

- ☐ How are subcontractors notified of available opportunities with your firm?

	5
	6

☐ Anticipated amount to be subcontracted on this project.

	5
	6

☐ Anticipated amount to be subcontracted to minority and/or women-owned businesses on this project.

	5
	6

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## CONSTRUCTION BID CERTIFICATION

**Please Note:** All fields below must be completed. If the field does not apply to you, please note N/A in that field. If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration)

Address:

City:  State:  Zip:

Telephone No.  FAX No.  Email:

Does your firm qualify for MBE or WBE status: MBE ☐ WBE ☐

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

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Name	Title	Name	Title
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Name	Title	Name	Title

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

Addendum No.	Date Received	Addendum No.	Date Received	Addendum No.	Date Received	Addendum No.	Date Received
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

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

The below signatory affirms that he has or will obtain all required permits and licenses from the appropriate agencies, and that his firm is authorized to do business in the State of Florida. The below signatory agrees to furnish all labor, tools, material, equipment and supplies, and to sustain all the expense incurred in doing the work set forth in strict accordance with the bid plans and contract documents at the unit prices indicated if awarded a contract. The below signatory has not divulged to, discussed, or compared this bid with other bidders, and has not colluded with any other bidder or parties to this bid whatsoever. Furthermore, the undersigned guarantees the truth and accuracy of all statements and answers contained in this bid. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a bid, that in no event shall the City's liability for bidder's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City protest ordinance contained in this competitive solicitation.

**Submitted by:**

Name (printed)

Date:

Signature

Date:

## Question and Answers for Bid #473-11980 - Provident Park Lighting

### Overall Bid Questions

There are no questions associated with this bid.