

Solicitation 12318-293

Coontie Hatchee Canoe Launch P12201 - Re-Bid

Bid Designation: Public



City of Fort Lauderdale

Bid 12318-293 Coontie Hatchee Canoe Launch P12201 - Re-Bid

| | |
|-------------------------------|--|
| Bid Number | 12318-293 |
| Bid Title | Coontie Hatchee Canoe Launch P12201 - Re-Bid |
| Bid Start Date | Jul 17, 2019 4:23:28 PM EDT |
| Bid End Date | Aug 9, 2019 2:00:00 PM EDT |
| Question & Answer End Date | Aug 1, 2019 5:00:00 PM EDT |
| Bid Contact | <p>Jim Hemphill Sr. Procurement Specialist Procurement Department 954-828-5143 jhemphill@fortlauderdale.gov</p> |
| Contract Duration | One Time Purchase |
| Contract Renewal | Not Applicable |
| Prices Good for | 120 days |
| Bid Comments | <p>Sealed bids will be received electronically until 2:00 P.M., local time, on Friday August 9, 2019, and opened immediately thereafter in the 5th Floor Conference Room, City Hall, 100 North Andrews Avenue, Fort Lauderdale, Florida, 33301, for BID NO. 12318-293, PROJECT NO., 12201 Coontie Hatchee Canoe Launch - Re-bid</p> <p>This project consists of Drawing File No.4-140-45; seventeen (17) sheets.</p> <p>This Project is located at This project is located at Coontie Hatchee Park, 1116 SW 15th Avenue, Fort Lauderdale Florida, 33312.</p> <p>The work to be accomplished under this contract includes, but is not limited to, the demolition of an approximate 49' section of existing seawall, soil removal for the construction of a proposed sandy beach, rip-rap sides, sewer pipe island planted with mangroves.</p> <p>Site improvements include, but are not limited to, 2 new site pole lights, additional trees/shrubs,</p> <p>Renovations include, but are not limited to, relocated pole lighting, existing irrigation adjustments, new Bahia sod replacement covering all disturbed areas, reconfigured mulch walking path.</p> <p>****Part of this project will be financed with the assistance from Waterways Assistance Programs. The Waterway Assistance Program is a grant program established by the Florida Legislature and the District for the purpose of financially cooperating with local governments to alleviate problems associated with the Atlantic Intracoastal Waterway and associated waterways within the District. The program is authorized by Section 374.976, Florida Statutes, and is administered under the provisions of Chapter 66B-2, Florida Administrative Code.*****</p> <p><u>NOTE: Payment on this contract will be made by Check/Visa or MasterCard.</u></p> <p><u>Licensing Requirements:</u> Possession of a <u>State of Florida General Contractors License</u> is required for this Project.</p> <p>There will not be a pre-bid meeting or site visit for this Invitation to Bid.</p> |

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

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, 4th floor, (Monday thru Friday 8:00 am to 4:30 pm) at a NON-REFUNDABLE cost of \$0.00 (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:

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.

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

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.

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

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

Item Response Form

Item **12318-293--01-01 - BASE BID: Mobilization**
 Lot Description **BASE BID**
 Quantity **1 lump sum**
 Unit Price
 Delivery Location **City of Fort Lauderdale**
 [See ITB Specifications](#)
 See ITB Specifications
 Fort Lauderdale FL 33301
 Qty 1

Description

Mobilization includes securing and cordoning off the work area and activation of contractor physical and manpower resources for the transfer to a construction site as well as ensuring all utilities are available for use during the actual construction, including MOT approval. THIS ITEM CANNOT EXCEED 5% OF THE BASE BID ONLY. (DOES NOT INCLUDE BID ALLOWANCES.)

Item **12318-293--01-02 - BASE BID: Project signage**
 Lot Description **BASE BID**
 Quantity **1 lump sum**
 Unit Price
 Delivery Location **City of Fort Lauderdale**
 [See ITB Specifications](#)
 See ITB Specifications
 Fort Lauderdale FL 33301
 Qty 1

Description

Project Signage-Furnish all labor, material & equipment to install two new 4 x 8 project wooden information signs. One placed facing the river and the other facing SW 15th Avenue during the construction of the project per specifications. The base bid shall include insurance, overhead and profit, and all other fixed costs.

Item **12318-293--01-03 - BASE BID: Demolition**
 Lot Description **BASE BID**
 Quantity **1 lump sum**
 Unit Price
 Delivery Location **City of Fort Lauderdale**
 [See ITB Specifications](#)
 See ITB Specifications
 Fort Lauderdale FL 33301
 Qty 1

Description

Furnish all materials, labor and equipment to sawcut, remove and properly dispose of existing seawall, earth work, and all related activities as shown on the plans and per specifications. The base bid shall include insurance, overhead and profit, and all other fixed costs.

Item **12318-293--01-04 - BASE BID: Erosion Control**
 Lot Description **BASE BID**

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

Description

Furnish all materials, labor and equipment to install synthetic erosion control, Type IV trenched silt fence, Type II floating turbidity barrier per plans, details and specifications.

Item **12318-293--01-05 - BASE BID: New Construction**
 Lot Description **BASE BID**
 Quantity **1 lump sum**
 Unit Price
 Delivery Location **City of Fort Lauderdale**
See ITB Specifications
 See ITB Specifications
 Fort Lauderdale FL 33301
 Qty 1

Description

Furnish all labor, material, and equipment to perform all work to be accomplished under this contract, which includes, but is not limited to, all new construction including but not limited to the construction of a new sandy beach canoe launch area, new electrical and site lighting, relocation of electrical and site lighting, relocation and new domestic water piping, relocation of park furnishings, new sod replacement, additional landscaping, irrigation adjustments, reconfigured mulch path. The base bid shall include insurance, overhead and profit, and all other fixed costs.

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

BID NO. 12318-293

PROJECT NO. 12201

**COONTIE HATCHEE CANOE
LAUNCH**



**THOMAS WHITE
PROJECT MANAGER II**

**IRINA TOKAR,
SENIOR PROJECT MANAGER**

**JAMES HEMPHILL
ASST. PROCUREMENT AND CONTRACTS MANAGER
Telephone: (954) 828-5143 E-mail: jhermphil@fortlauderdale.gov**

TABLE OF CONTENTS

| <u>Description</u> | <u>Pages</u> |
|--|------------------------|
| I. BID INFORMATION | |
| Invitation to Bid..... | ITB-1 thru ITB-2 |
| Instruction to Bidders..... | IB-1 thru IB-6 |
| Special Conditions..... | SC-1 thru SC-8 |
| II. CONSTRUCTION AGREEMENT (SAMPLE) | C-1 thru C-41 |
| III. GENERAL CONDITIONS..... | GC-1 thru GC-11 |
| IV. TECHNICAL SPECIFICATIONS | |
| DIVISION 1 – GENERAL REQUIREMENTS | |
| 011000 Summary..... | 4 |
| 012100 Allowances..... | 2 |
| 012200 Unit Prices..... | 1 |
| 012500 Substitution Procedures | 3 |
| 012600 Contract Modification Procedures | 3 |
| 012900 Payment Procedures..... | 4 |
| 013100 Project Management and Coordination | 8 |
| 013200 Construction Progress Documentation | 5 |
| 013233 Photographic Documentation | 3 |
| 013300 Submittal Procedures | 10 |
| 014000 Quality Requirements..... | 6 |
| 015900 Project Sign Request Form | 1 |
| Project Sign..... | 4 |
| 017700 Closeout Procedures..... | 2 |
| DIVISION 2 - SITE CONSTRUCTION | |
| 02010 Subsurface Investigation | 1 |
| 02110 Cleaning and Grubbing | 2 |
| 02210 Excavation and Swale Grading | 3 |
| 02211 Site Grading | 3 |
| 02260 Finish Grading..... | 2 |
| 02262 Steel Sheet Pile..... | 6 |
| 02370 Rip Rap | 7 |
| 02401 Dewatering..... | 4 |
| 02950 Tree, Plants and Ground Cover..... | 6 |

Description

Pages

DIVISION 3 - CONCRETE

| | | |
|-------|-------------------------|----|
| 03100 | Formwork | 6 |
| 03200 | Reinforcement..... | 5 |
| 03300 | CIP Concrete | 17 |
| 03350 | Concrete Finishes | 5 |
| 03370 | Concrete Curing | 6 |

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/certification

- CITB Prime Contractor ID
- CITB Questionnaire Sheets
- CITB Non-Collusion Statement
- Non-Discrimination Certification
- Contract Payment Method
- CITB Construction Bid Certification

INVITATION TO BID

Sealed bids will be received electronically until 2:00 P.M., local time, on **FRIDAY, AUGUST 9, 2019**, and opened immediately thereafter in the 5th Floor Conference Room, City Hall, 100 North Andrews Avenue, Fort Lauderdale, Florida, 33301, for **BID NO. 12318-293, PROJECT NO., 12201 COONTIE HATCHEE CANOE LAUNCH – RE-BID**

This project consists of Drawing File No.4-140-45; seventeen (17) sheets.

This Project is located at This project is located at Coontie Hatchee Park, 1116 SW 15th Avenue, Fort Lauderdale Florida, 33312.

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Site improvements include, but are not limited to, 2 new site pole lights, additional trees/shrubs,

Renovations include, but are not limited to, relocated pole lighting, existing irrigation adjustments, new Bahia sod replacement covering all disturbed areas, reconfigured mulch walking path.

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

Licensing Requirements: Possession of a State of Florida General Contractors License is required for this Project.

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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

INSTRUCTIONS TO BIDDERS (continued)

services, and shall provide the City prices on such additional items or services. If the price(s) offered are not acceptable to the City, and the situation cannot be resolved to the satisfaction of the City, the City reserves the right to procure those items or services from other vendors, or to cancel the contract upon giving the Contractor thirty (30) days written notice.

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

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

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 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 follow the protest procedure as found in the city's procurement ordinance 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/departments/finance/procurement-services/notices-of-intent-to-award>.

The complete protest ordinance may be found on the city's web site at the following link: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2A_D_ARTVFI_DIV2PR_S2-182DIREPR

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, 4th 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 (2018), 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.

INSTRUCTIONS TO BIDDERS (continued)

AUDIT OF CONTRACTOR'S RECORDS - Upon execution of the Contract, the City reserves the right to conduct any necessary audit of the Contractor's records. Such an audit, or audits, may be conducted by the City or its representatives at any time prior to final payment, or thereafter, for a period up to three (3) years. The City may also require submittal of the records from either the Contractor, the Subcontractor, or both. For the purpose of this Section, records shall include all books of account, supporting documents and papers deemed necessary by the City to assure compliance with the contract provisions.

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

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

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

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

EARLY PROJECT COMPLETION INCENTIVE

The City reserves the right to or not to negotiate an incentive program with the awarded vendor for timely completion. The City is under no obligation to offer such an incentive.

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.

INSTRUCTIONS TO BIDDERS (continued)

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.

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

SPECIAL CONDITIONS

01. PURPOSE

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

02. TRANSACTION FEES

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

03. SUBMISSION OF BIDS

It is the sole responsibility of the Contractor to ensure that their bid is submitted electronically through BidSync at www.bidsync.com and that any bid security not submitted via BidSync reaches the City of Fort Lauderdale, Procurement Services Division, 6th floor, Room 619, 100 N. Andrews Avenue, Fort Lauderdale, 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 SUBMITTALS WILL NOT BE ACCEPTED. PLEASE SUBMIT YOUR BID RESPONSE ELECTRONICALLY.**

04. INFORMATION OR CLARIFICATION

For information concerning procedures for responding to this solicitation, contact **James Hemphill, Asst. Procurement and Contracts Manager**, at (954) 828-5143 or email at jhemphill@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. 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.

05. GRANT

Part of this project will be financed with the assistance from Waterways Assistance Programs. The Waterway Assistance Program is a grant program established by the

Florida Legislature and the District for the purpose of financially cooperating with local governments to alleviate problems associated with the Atlantic Intracoastal Waterway and associated waterways within the District. The program is authorized by Section 374.976, Florida Statutes, and is administered under the provisions of **Chapter 66B-2, Florida Administrative Code.**

06. CONTRACT TIME

- 6.1 The Contractor recognizes that TIME IS OF THE ESSENCE. The Work shall commence within **30** calendar days (20 working days) of the date of the Notice to Proceed.
- 6.2 The Work shall be Substantially Completed within **180** calendar days (120 working days) after the date when the Contract Time commences to run as provided in the Notice to Proceed.
- 6.3 The Work shall be finally completed on the Final Completion Date and ready for final payment in accordance with this Agreement within **210** calendar days (140 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.

07. 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.

08. REQUIRED LICENSES/CERTIFICATIONS

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

State of Florida General Contractors License

Note: Contractor *must* have proper licensing and be able to provide evidence of same, if requested, at time of award.

09. SPECIFIC EXPERIENCE REQUIRED

The following expertise is required to be considered for this contract. Specific references attesting to this expertise must be submitted with bid.

The contractor shall have previous construction experience in seawall demolition and marine construction 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.

NOTE: REFERENCES SHALL NOT INCLUDE ONLY CITY OF FORT LAUDERDALE EMPLOYEES OR WORK PERFORMED FOR THE CITY. THE CITY IS ALSO INTERESTED IN WORK EXPERIENCE AND REFERENCES FROM ENTITIES OTHER THAN THE CITY OF FORT LAUDERDALE.

By signing this bid solicitation, contractor is affirming that this expertise will be provided for this contract at no additional charge.

11. 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.

| Allowance | \$ |
|-----------------------------------|-----------------|
| Additional equipment allowance | \$10,000 |
| Additional labor allowance | \$10,000 |
| Additional material allowance | \$10,000 |
| Permit fee allowance | \$10,000 |
| Permit fees and testing allowance | \$5,000 |
| TOTAL | \$45,000 |

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

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

Insurance

11.1 As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at the Contractor's sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and

maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be from insurers authorized to write insurance policies in the State of Florida and that possess an A.M. Best rating of A-, VII or better. All insurance policies are subject to approval by the City's Risk Manager.

The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and endorsements may not be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposure, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

11.1.1 Commercial General Liability

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

- \$1,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$1,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for Contractual Liability and Independent Contractors.

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

11.1.2 Business Automobile Liability

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

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

11.1.3 Workers' Compensation and Employer's Liability

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers'

Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

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

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

Insurance Certificate Requirements

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

The Certificate Holder should read as follows:

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

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

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

The Contractor's insurance coverage shall be primary insurance as applied to the City and the City's officers, employees, and volunteers. Any insurance or self-insurance maintained by the City covering the City, the City's officers, employees, or volunteers shall be non-contributory.

Any exclusion or provision in the insurance maintained by the Contractor that excludes coverage for work contemplated in this Agreement shall be unacceptable and shall be considered breach of contract.

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

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

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

11.1.4 OPTIONAL COVERAGES (for specialty contracts as determined by Risk Management)

11.1.4.1 Contractors Pollution Liability Coverage

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

11.1.4.2 Disposal Coverage

The Contractor shall designate the disposal site and furnish a Certificate of Insurance from the disposal facility for Environmental Impairment Liability Insurance, covering liability for sudden and accidental occurrences in an amount not less than \$1,000,000 per claim and shall include liability for non-sudden occurrences in an amount not less than \$1,000,000 per claim.

11.1.4.3 Watercraft Liability

Coverage must be afforded in an amount not less than \$1,000,000 per occurrence and must cover the utilization of watercraft, including Bodily Injury and Property Damage arising out of ownership, maintenance, or use of any watercraft, including owned, non-owned, and hired.

Coverage may be provided in the form of an endorsement to the Commercial General Liability policy, or in the form of a separate policy covering Watercraft Liability or Protection and Indemnity for Bodily Injury and Property Damage.

NOTE: CITY PROJECT NUMBER AND NAME MUST APPEAR ON EACH CERTIFICATE, AND THE CITY OF FORTLAUDERDALE MUST BE NAMED ON THE CERTIFICATE AS AN “ADDITIONAL INSURED” ON ALL LIABILITY POLICIES, WITH THE EXCEPTION OF WORKERS’ COMPENSATION.

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

- 11. PERFORMANCE AND PAYMENT BOND: 100%
Number of awards anticipated: 1**

12. CITY PROJECT MANAGER

The Project Manager is hereby designated by the City as **Thomas White** whose address is 100 North Andrews, **5th** Floor, Fort Lauderdale, FL 33301, telephone number: **(954) 828-5350**, and email address is **ThWhite@fortlauderdale.gov**. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

- 13. LIQUIDATED DAMAGES** *(See Article 16, Liquidated Damages, of the Contract for details)*

Upon failure of the Contractor to complete the Work within the time specified for completion, the Contractor shall pay to the City the sum of **Five Hundred Dollars (\$500.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. (See Article 16, Liquidated Damages Clause, of the Contract)

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

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

Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

15. WORK SCHEDULE (including overtime hours): _____

Regular work hours: **8:00 am to 5:00 pm, Monday through Friday.**

City Inspector Hours: **8:00 am to 4:30 pm, Monday through Friday.**

Any inspection requested by the contractor outside those hours will be considered overtime to be paid by the Contractor.

16. INSPECTION OVERTIME COST: \$50 - \$75 per hour is our estimated range depending upon who the inspector is during construction and that rate is based upon his or her current hourly rate.

**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.

- 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:

COONTIE HATCHEE CANOE LAUNCH
ITB # 12234-293, PROJECT #12201

- 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 This project is located at Coontie Hatchee Park, 1116 SW 15th Avenue, Fort Lauderdale Florida, 33312.

The work to be accomplished under this contract includes, but is not limited to, the demolition of an approximate 49' section of existing seawall, soil removal for the construction of a proposed sandy beach, rip-rap sides, sewer pipe island planted with mangroves.

Site improvements include, but are not limited to, 2 new site pole lights, additional trees/shrubs,

Renovations include, but are not limited to, relocated pole lighting, existing irrigation adjustments, new Bahia sod replacement covering all disturbed areas, reconfigured mulch walking path]

- 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 **Thomas White** whose address is 100 N. Andrews Avenue, 5th Floor, Fort Lauderdale, FL 33301, telephone number: **(954) 828-5350**, and email address is thomaswh@fortlauderdale.gov. The Project Manager will assume all duties and responsibilities and will have the rights and authorities assigned to the Project Manager in the Contract Documents in connection with completion of the Work in accordance with this Agreement.

ARTICLE 4 – CONTRACT DOCUMENTS

The Contract Documents which comprise the entire Agreement between the City and Contractor are 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.
- 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 **30** calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within **180** 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 **210** calendar days after the date when the Contract Time commences to run as provided in the Notice to Proceed.

ARTICLE 6 – CONTRACT PRICE

- 6.1 City shall pay Contractor for performance of the Work in accordance with Article 7, subject to additions and deletions by Change Order, as provided for in this Agreement.
- 6.2 The parties expressly agree that the Contract Price, which shall not exceed the amount of \$ [REDACTED], 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 (1st) and the tenth (10th) day after the end of each calendar month for which payment is requested. All progress payments will be made on the basis of the progress of the Work completed.
- 7.3 Prior to Final Completion, progress payments will be made in an amount equal to ninety 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. The City has implemented a Purchasing Card Program utilizing both VISA and MASTERCARD networks. Purchases made from this Contract shall be made using the City's Purchasing Card. Contractor will receive payment from the purchasing card in the same manner as other credit card purchases. Accordingly, bidders must presently have the ability to accept these credit cards or take whatever steps necessary to implement the ability before the start of the contract term, or contract award by the City. The City reserves the right to revise this program as necessary.

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.
- 8.6 Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.
- 8.7 Contractor has given City written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution by City is acceptable to the Contractor.
- 8.8 Labor
- 8.8.1 The Contractor shall provide competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The Contractor shall at all times maintain good discipline and order at the site.
- 8.8.2 The Contractor shall, at all times, have a competent superintendent, capable of reading and thoroughly understanding the drawings and specifications, as the Contractor's agent on the Work, who shall, as the Contractor's agent, supervise, direct and otherwise conduct the Work.
- 8.8.3 The Contractor shall designate the superintendent on the job to the City, in writing, immediately after receipt of the Notice to Proceed. The Contractor understands and agrees that the superintendent's physical presence on the job site is indispensable to the successful completion of the Work. If the superintendent is frequently absent from the job site, the Project Manager may deliver written notice to the Contractor to stop work or terminate the Contract in accordance with Article 17.
- 8.8.4 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.

8.9 Materials:

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

8.9.2 All 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.

8.10 Work Hours: Except in connection with the safety or protection of persons, or the Work, or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all work at the site shall be performed during regular working hours between 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.

8.11 Patent Fee and Royalties: The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work, or any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. The Contractor hereby expressly binds himself or itself to indemnify and 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.

8.12 Permits: The Contractor shall obtain and pay for all permits and licenses. There shall be no allowance for Contractor markup, overhead or profit for permits and licenses. The Contractor shall pay all government charges which are applicable at the time of opening of proposals. It shall be the responsibility of the Contractor to secure and pay

for all necessary licenses and permits of a temporary nature necessary for the prosecution of Work.

- 8.13 Law and Regulations: The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the specifications or plans are 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.
- 8.14 Taxes: The Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the laws of the City of Fort Lauderdale, County of Broward, State of Florida.
- 8.15 Contractor Use of Premises: The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits and/or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

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

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

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

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

8.16.1 Flow of material and equipment from suppliers.

8.16.2 The interrelated work with affected utility companies.

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

8.16.4 The effort of independent testing agencies.

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

8.18 Safety and Protection:

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

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

8.18.1.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.

8.18.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

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

anyone for whose acts any of them may be liable, shall be remedied by the Contractor. The Contractor's duties and responsibilities for safety and protection of the Work shall continue until such time as all the Work is completed and accepted by the City.

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

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

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

For other and additional consideration, the Contractor hereby agrees, at its sole cost and expense, to indemnify and protect, defend, and hold harmless the City and its respective employees, agents, officials, officers, representatives, contractors and subcontractors, successors, and assigns (hereafter the "City") from and against any and all claims, demands, losses, damages, costs, expenses, including but not limited to mitigation, restoration, and natural restoration expenses, liabilities, assessments, fines, penalties charges, administrative and judicial proceedings and orders, judgments, causes of action, in law or in equity, remedial action requirements and/or

enforcement actions of any kind (including, without limitation, attorneys' fees and costs) directly or indirectly arising out of or attributable to, in whole or in part, the Contractor's use, handling, storage, release, threatened release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of a Hazardous Substance (excluding asbestos) on, under, from, to or about the Premises or any other activity carried on or undertaken on or off the Premises by the Contractor or its employees, agents or subcontractors, in connection with the use, handling, storage, release, threatened release, discharge, treatment, mitigation, natural resource restoration, removal, transport, decontamination, cleanup, disposal and/or presence or any Hazardous Substance including asbestos located, transported, or present on, under, 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 Response, Compensation and Liability Act, as amended; (ii) the clean-up costs, fines, damages, or penalties incurred pursuant to any applicable provisions of Florida law; and (iii) the cost and expenses of abatement, correction or cleanup, fines, damages, response costs, or penalties which arise from the provisions of any other statute, law, regulation, code ordinance, or legal requirement state or federal; and (c) liability for personal injury or property damage arising under any statutory or common law tort theory, including damages assessed for the maintenance of a public private nuisance, response costs, or for the carrying on of an abnormally dangerous activity.

- 8.22 No Extended Damages: For other and additional good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Contractor covenants and agrees that in the event of any delay of construction or for any other reason or allegation or claim, and notwithstanding the reason of the delay, reason, claim or allegation or who caused them or the construction delay or whether they were caused by the City, that there will be no entitlement to Contractor to or for any direct or indirect financial damages or losses for extended corporate overhead impact, extended project overhead impacts, project support services, mobilization or demobilization or by whatever other label or legal concept or theory and types of names or labels or basis such claims may have, or any business damages or losses of whatever type or nature, and Contractor hereby waives any right to make any such claim or claims. This provision will have application and effect when construction delays are anticipated and agreed upon by both the City and the Contractor.
- 8.23 No Liens: If any Subcontractor, supplier, laborer, or materialmen of Contractor or any other person directly or indirectly acting for or through Contractor files or attempts to file a mechanic's or construction lien against the real property on which the work is performed or any part or against any personal property or improvements or claim against any monies due or to become due from the City to Contractor or from Contractor to a Subcontractor, for or on account of any work, labor, services, material,

equipment, or other items furnished in connection with the Work or any Change Order, Contractor agrees to satisfy, remove, or discharge such lien or claim at its own expense by bond, payment, or otherwise within twenty (20) days of the filing or from receipt of written notice from the City.

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

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

Upon issuance of a Hurricane Warning by the National Weather Service, if the Contractor has not already done so, the Contractor shall implement its hurricane preparedness plan. Cost of development and implementation of the hurricane preparedness plan shall be considered as incidental to construction. Cost of any clean up and rework required after the storm will be considered normal construction risk within Florida and shall not entitle the Contractor to any additional compensation. Contractor shall be entitled to request an extension in time for completion of the Work, in accordance with the provisions of Article 15 of this Agreement, equal to the time 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 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 eq.*).

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 As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at the Contractor's sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be from insurers authorized to write insurance policies in the State of Florida and that possess an A.M. Best rating of A-, VII or better. All insurance policies are subject to approval by the City's Risk Manager.

The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and endorsements may not be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposure, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

10.3.2 Commercial General Liability

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

- \$1,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$1,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for Contractual Liability and Independent Contractors.

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

10.3.3 Business Automobile Liability

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

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

10.3.4 Workers' Compensation and Employer's Liability

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

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

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

Insurance Certificate Requirements

- a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than thirty (30) days prior to the start of work contemplated in this Agreement.
- b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.

- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
- g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

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

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

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

The Contractor's insurance coverage shall be primary insurance as applied to the City and the City's officers, employees, and volunteers. Any insurance or self-insurance maintained by the City covering the City, the City's officers, employees, or volunteers shall be non-contributory.

Any exclusion or provision in the insurance maintained by the Contractor that excludes coverage for work contemplated in this Agreement shall be unacceptable and shall be considered breach of contract.

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

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

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

10.3.5 OPTIONAL COVERAGES (for specialty contracts as determined by Risk Management)

10.3.5.1 Contractors Pollution Liability Coverage

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

10.3.5.2 Disposal Coverage

The Contractor shall designate the disposal site and furnish a Certificate of Insurance from the disposal facility for Environmental Impairment Liability Insurance, covering liability for sudden and accidental occurrences in an amount not less than \$1,000,000 per claim and shall include liability for non-sudden occurrences in an amount not less than \$1,000,000 per claim.

10.3.5.3 Watercraft Liability

Coverage must be afforded in an amount not less than \$1,000,000 per occurrence and must cover the utilization of watercraft, including Bodily Injury and Property Damage arising out of ownership, maintenance, or use of any watercraft, including owned, non-owned, and hired.

Coverage may be provided in the form of an endorsement to the Commercial General Liability policy, or in the form of a separate policy covering Watercraft Liability or Protection and Indemnity for Bodily Injury and Property Damage.

NOTE: CITY PROJECT NUMBER AND NAME MUST APPEAR ON EACH CERTIFICATE, AND THE CITY OF FORTLAUDERDALE MUST BE NAMED ON THE CERTIFICATE AS AN "ADDITIONAL INSURED" ON ALL LIABILITY POLICIES, WITH THE EXCEPTION OF WORKERS' COMPENSATION.

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

11.1 Warranty: The Contractor warrants and guarantees to the City that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to the Contractor. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.

11.1.1 Warranty of Title: The Contractor warrants to the City that it possesses good, clear and marketable title to all equipment and materials provided and that there are no pending liens, claims or encumbrances against the equipment and materials.

11.1.2 Warranty of Specifications: The Contractor warrants that all equipment, materials and workmanship furnished, whether furnished by the Contractor, its subcontractors or suppliers, will comply with the specifications, drawings and other descriptions supplied or adopted and that all services will be performed in a workmanlike manner.

11.1.3 Warranty of Merchantability: The Contractor warrants that any and all equipment to be supplied pursuant to this Agreement is merchantable, free from defects, whether patent or latent in material or workmanship, and fit for the ordinary purposes for which it is intended.

11.2 Tests and Inspections: Contractor shall retain the services of an independent, certified, testing lab to perform all testing as required by the specifications, Contract drawings, and any applicable permitting agency. Contractor shall provide evidence of certification to the City before the work and testing is done. Testing results shall be submitted to the 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 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, 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 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:

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 **Five Hundred Dollars (\$500.00)** for each and every calendar day that the completion of the Work is delayed beyond the time specified in this Agreement for completion, as fixed and agreed liquidated damages and not as a penalty, so long as the delay is caused by the Contractor. Should an act of God or the acts or omissions of the City, its agents or representatives, in derogation to the terms of this Agreement cause the delay, the Contractor shall not be responsible for the delay nor liquidated damages. Liquidated damages are fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by the City as a consequence of such delay and both parties desiring to obviate any question of dispute concerning the amount of damages and the cost and effect of the failure of the

Contractor to complete the Work on time. Liquidated damages shall apply separately to each portion of the Work for which a time of completion is given. The City shall have the right to deduct from or retain any compensation which may be due or which may become due and payable to the Contractor the amount of liquidated damages, and if the amount retained by the City is insufficient to pay in full such liquidated damages, the Contractor shall pay all liquidated damages in full. The Contractor shall be responsible for reimbursing the City, in addition to liquidated damages or other damages for delay, for all costs of engineering, architectural fees, and inspection and other costs incurred in administering the construction of the Project beyond the completion date specified or beyond an approved extension of time granted to the Contractor whichever is later. Delays caused by or resulting from entities, contractors or subcontractors who are not affiliated with the Contractor shall not give rise to a claim by Contractor for damages for increase in material and/or labor costs. Such entities, contractors and subcontractors include, but are not limited to, the City's contractors and subcontractors, Florida Power and Light Company, AT&T, and Florida East Coast Railway, LLC.

- 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 to take charge of property of the Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of the Contractor's creditors.
- 17.2.4 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 Contractor files a voluntary petition under 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303, the Contractor shall acknowledge the extent, validity, and priority of the lien recorded in favor of the City. The Contractor further agrees that in the event of this default, the City shall, at its option, be entitled to seek relief from the automatic stay pursuant to 11 U.S.C. 362. The City shall be entitled to relief from the automatic stay pursuant to 11 U.S.C. 362(d) (1) or (d) (2), and the Contractor agrees to waive the notice provisions in effect pursuant to 11 U.S.C. 362 and any applicable Local Rules of the United States Bankruptcy Court. The Contractor acknowledges that such waiver is done knowingly and voluntarily.

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

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

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

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

- 17.5 Termination for Convenience: This 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:

[Redacted signature area]

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 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 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 (2018), 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 (2018), 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 (2018), 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 (2018), 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 (2018), 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 Attorney Fees: If CITY or CONSULTANT incurs any expense in enforcing the terms of this Agreement through litigation, the prevailing party in that litigation shall be reimbursed for all such costs and expenses, including but not limited to court costs, and reasonable attorney fees incurred during litigation.

22.10 Public Records

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

Contractor shall:

1. Keep and maintain public records 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 (2018), 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

Coontie Hatchee Canoe Launch
(Contractor)
Project #12201

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: _____
CHRISTOPHER J. LAGERBLOOM, City Manager

(CORPORATE SEAL)

ATTEST:

By: _____
JEFFREY A. MODARELLI
City Clerk

Approved as to Legal Form:

By: _____
RHONDA MONTOYA HASAN
Assistant City Attorney

SAMPLE CONSTRUCTION AGREEMENT

CONTRACTOR

WITNESSES:

CONTRACTOR,
a Florida corporation.

Signature

By _____

Print Name

PRINT NAME

Title

Signature

ATTEST:

Print Name

BY: _____
Signature

PRINT NAME

Secretary

(CORPORATE SEAL)

STATE OF FLORIDA:
COUNTY OF BROWARD:

The foregoing instrument was acknowledged before me this ____ day of _____, 2018, 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: _____

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 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.

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, conflictions, 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 aide services to be provided to a person who may be injured during the project duration. The Contractor shall also comply with the OSHA requirements as defined in the United States Labor Code 29 CFR 1926.50.

In addition, the Contractor must report immediately to the 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 City's Transportation and Mobility Department, Broward County, Florida Department of Transportation, as applicable, any permits required to detour traffic or close any street before starting to work in the road. 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 (2018), 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 (2018), 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 (2018), 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 (2018), 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 (2018), 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

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 (2018), 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.

SECTION 011000 SUMMARY

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.
- B. "SPECIFICATIONS" referred to in the project documents are to include and incorporate the following:
 - 1. CONSTRUCTION STANDARDS AND SPECIFICATIONS, Office of the City Engineer, City of Fort Lauderdale, January 1982, including any revisions and/or ARCHITECTURAL CONSTRUCTION SPECIFICATIONS, Office of the City Engineer, City of Fort Lauderdale, January 1982, including any revisions.
 - a. The above-referenced specifications are made a part of all projects or improvements let for bid by the City's Public Works Department (Engineering and Architectural Bureau). It is mandatory that prospective bidders and Contractors familiarize themselves with and comply with these referenced specifications when preparing their proposals and during construction of any work awarded.
 - 2. The written specifications package entitled "PROJECT 12201 - COONTIE HATCHEE PARK CANOE/KAYAK LAUNCH.

1.2 INTENT OF DRAWINGS AND SPECIFICATIONS

- A. Intent of the drawings and specifications is to cover an installation complete in every respect. It is not necessarily intended to provide every detail on drawings or in the specifications. The City will not be responsible for absence of any detail which the Contractor may require nor for any special construction which may be found necessary as work progresses. If an item is either indicated or specified, it shall be considered sufficient for inclusion of said item in the contract. Contractor shall furnish and install materials and equipment normally furnished with such systems and as needed to complete a fully operational installation, whether mentioned or not, which are customary to the trade.
- B. Incidental accessories not usually shown or specified, but which are necessary for the proper installation and operation shall be included in the work without additional cost to the City, as if herein depicted or specified.
- C. Any apparatus, appliance, material or work not shown on drawings, but mentioned in specifications, or vice versa, shall be furnished, delivered and installed by the Contractor without additional cost to the City.
- D. Drawings are diagrammatic and indicate the general arrangement of systems and work indicated (do not scale drawings). Consult the Architect for exact locations of fixtures, furniture, and equipment, etc. where these items are not definitively located on the drawings.

1.3 SUMMARY

- A. This Section includes the following:
 - 1. Project Information

2. Work covered by the Contract Documents.
3. Type of the Contract.
4. Use of premises.
5. City's occupancy requirements.
6. Work restrictions.
7. Specification formats and conventions.

B. Related Sections include the following:

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of City's facilities.

1.4 PROJECT INFORMATION

A. Project Identification: Project 12201 - COONTIE HATCHEE PARK CANOE/KAYAK LAUNCH

1. Project Location: 1116 SW 15th Avenue, Fort Lauderdale, Florida

B. Owner: City of Fort Lauderdale

1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work is defined by the Contract Documents and consists of the following:

1. The Work includes, but is not limited to, clearing and grubbing, selective site demolition, soil excavation, grading, rip-rap installation, new sandy beach, sodding, landscaping, irrigation adjustments, utility relocation, park furnishing relocation, electrical power and site lighting systems, domestic water piping, reconfigured mulch walking path.

B. TYPE OF CONTRACT

1. Project will be constructed under a single prime contract.
 - a. Division of work: The division of work among it's separate Subcontractors is the responsibility of the General Contractor, and the City assumes no responsibility to act as arbitrator to establish subcontract limits between any sections of the work.

1.6 USE OF PREMISES

A. General: Contractor shall have limited use of project site for construction operations as indicated on Drawings by the Contract limits, and as indicated by requirements of this Section.

1.7 CITY'S OCCUPANCY REQUIREMENTS

A. City Limited Occupancy of Completed Areas of Construction: City reserves the right to occupy and to place and install equipment in completed areas of site, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before City occupancy.
2. Obtain a Certificate of Occupancy from City Construction Services Department. Deliver signed copy to City Representative.

1.8 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 7:00 a.m. to 4:00 p.m., Monday through Friday, except otherwise indicated.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by City or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify City not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without City's written permission.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to City occupancy with City.

1.9 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 49-division format and CSI/CSC's "MasterFormat" numbering system.
1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

- a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual

1.10 MISCELLANEOUS PROVISIONS

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100**ALLOWANCES****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 governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
 - 2. Unit-cost allowances.
- C. Related Sections include the following:
 - 1. Division 01 Section "Unit Prices" for procedures for using unit prices.
 - 2. Division 01 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.
 - 3. Divisions 02 through 33 Sections for items of Work covered by allowances.

1.3 INFORMATIONAL SUBMITTALS

- A. Submit invoices for use in fulfillment of allowance.
- B. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.4 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.5 LUMP-SUM AND UNIT-COST ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Contract sum and not part of the allowance.

- C. Retain "Unused Materials" Paragraph below if allowances are not used for low-cost or single-unit items only.
- D. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to City, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by City. Deliver unused material to City's storage space as directed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

END OF SECTION 012100

**SECTION 012200
UNIT PRICES**

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 unit prices.
- B. Related Sections include the following:
1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 2. Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. City reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at City's expense, by an independent surveyor acceptable to Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (NOT Used)

END OF SECTION 012200

SECTION 012500 SUBSTITUTION 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 substitutions.
- B. Related Sections:
 - 1. Division 01 Section "Allowances" for products selected under an allowance.
 - 2. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
 - 3. Divisions 02 through 33 Sections for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or City that are not required in order to meet other Project requirements but may offer advantage to Contractor or City.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use facsimile of form provided in the Project Manual.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

- b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with Florida Building Code in effect for Project.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

**SECTION 012600
CONTRACT MODIFICATION PROCEDURES**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1.3 MINOR CHANGES IN THE WORK

- A. Architect 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 Architect on the form included following the end of Part 3.

1.5 PROPOSAL REQUESTS

- A. City-Initiated Proposal Requests: Architect 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 Architect are not instructions either to stop work in progress or to execute the proposed change.
 2. Within time specified in Proposal Request or 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

- an extension of the Contract Time.
- e. Quotation Form: Use forms provided by City. Sample copies are included in the Project Manual.
- 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 Architect.
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 provided by City. Sample copies are included in the Project Manual.

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, Architect 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

- A. Construction Change Directive: Architect may issue a Construction Change Directive on form included in Project Manual. 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.
- 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 012900 PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Allowances" for procedural requirements governing handling and processing of allowances.
 - 2. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 3. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
 - 4. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of 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 days before the date scheduled for submittal of initial Applications for 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.
 - a. Include separate line items under principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
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.
 - 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 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 with the releases from the Subcontractors, suppliers, etc., until the final pay request.
- D. For the final pay request, the General Contractor will be required to submit FINAL release of liens for ALL Subcontractors, suppliers, etc., and for ALL labor BEFORE FINAL PAYMENT WILL BE MADE.
- E. No partial payments, after the first payment, will be made until all partial release of liens are submitted for the preceding month's billing, as described
- F. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by City.
- G. Payment Application Forms: Use City Form "PERIODIC ESTIMATE FOR PARTIAL PAYMENT" as form for Applications for Payment.
 - 1. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action.
 - 2. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- H. Release of Lien: With each Application for Payment, submit release of lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial release of lien on each item for amount requested in previous application, after deduction for retainage, on each item.

2. When an application shows completion of an item, submit final release of lien.
 3. City reserves the right to designate which entities involved in the Work must submit release of lien forms.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Schedule of unit prices.
 6. Submittals Schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. Copies of building permits.
 9. Initial progress report.
 10. Report of preconstruction conference.
- J. 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

**SECTION 013100
PROJECT MANAGEMENT AND COORDINATION**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
1. Administrative and supervisory personnel.
 2. Project meetings.
 3. Requests for Interpretation (RFIs).
- B. 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. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Make adequate provisions to accommodate items scheduled for later installation.
 3. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for City and separate contractors if coordination of their

Work is required.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Project closeout activities.
 7. Project closeout activities.

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 products.
 2. Number and title of related Specification Section(s) covered by subcontract.
- B. Key Personnel Names: Within 5 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. Post copies of list in temporary field office. Keep list current at all times.

1.6 SPECIAL PROJECT PROCEDURES

- A. Discrepancies, Errors: Should discrepancies or errors appear in the drawings or specifications concerning materials, workmanship, or quantity of work to be performed, the Contractor will be required to immediately notify the City before proceeding with the work. If the Contractor fails to notify the City and proceeds with the work, Contractor will be required to correct the errors at his/her own expense. In the event of a conflict between the drawings and specifications, the City will decide on the way to perform the work or supply the materials. See also General Conditions, "Contractor to Check Plans and Data," Section 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,
 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. Include special personnel required for coordination of operations with other contractors.

1.8 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify City Representative and Architect 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 Architect, 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 E-MAILED 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 Architect, 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. City's occupancy requirements
 15. Responsibility for temporary facilities and controls
 16. Construction waste management and recycling
 17. Parking availability
 18. Office, work and storage areas.
 19. Working hours
 20. Safety and first-aid procedures
 21. Security procedures
 22. Housekeeping procedures including progress cleaning.
 23. Schedule of values.

24. 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 Architect, 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) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) RFIs.
 - 16) Status of proposal requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
 3. Minutes: General Contractor shall record the meeting minutes. These minutes shall indicate all items discussed as well as agreed upon or suggested solutions. They shall be a true reflection of what occurred at the meeting.
 4. Reporting: Within 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.
- D. Project Closeout Conference: City shall Schedule and conduct a project closeout conference, at a time convenient to City and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of City, City's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Preparation of Contractor's punch list.
 - e. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - f. Submittal procedures.
 - g. Coordination of separate contracts.
 - h. Owner's partial occupancy requirements.
 - i. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

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, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. 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.
- D. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect'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 Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect'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 Architect in writing within 10 days of receipt of the RFI response.
- E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
- F. 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 Architect's response was received.
7. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
8. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

**SECTION 013200
CONSTRUCTION PROGRESS DOCUMENTATION**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Contractor's Construction Schedule.
 2. Submittals Schedule.
 3. Daily construction reports.
 4. Site condition reports.
 5. 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 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 2. Predecessor Activity: An activity that precedes another activity in the network.
 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.

- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either City or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Milestone: A key or critical point in time for reference or measurement.
- G. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the one of the following formats:
 - 1. Working electronic copy of schedule file, where indicated.
 - 2. PDF electronic file.
 - 3. Two paper copies.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
- 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.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

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

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
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 story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
- Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 30 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 5. Punch List and Final Completion: Include not more than 10 days for completion of punch list items and final completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Fabrication.
 - e. Deliveries.
 - f. Installation.
- D. 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.

- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 - 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and Contract Time.
- F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- G. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.
 - 1. Microsoft Project for Windows operating system.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 10 days of date established for the Notice to Proceed. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

2.4 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (refer to special reports).
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Emergency procedures.
 - 12. Orders and requests of authorities having jurisdiction.
 - 13. Change Orders received and implemented.
 - 14. Construction Change Directives received and implemented.

15. Services connected and disconnected.
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.
- B. Distribution: Distribute copies of approved schedule to Architect, 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 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 013233
PHOTOGRAPHIC DOCUMENTATION**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
1. Preconstruction photographs.
 2. Periodic construction photographs.
 3. Final Completion construction photographs.
- B. Related Sections include the following:
1. Division 01 Section "Submittal Procedures" for submitting photographic documentation.
 2. Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.
 3. Division 31 Section "Site Clearing" for photographic documentation before site clearing operations commence.

1.3 INFORMATIONAL SUBMITTALS

- A. Construction Photographs: Submit digital media files of each photographic view within seven 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.

1.4 COORDINATION

- A. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities, including temporary lighting required to produce clear, well-lit photographs without obscuring shadows.

1.5 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 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. Aerial Photographer: Engage a qualified commercial aerial photographer to take aerial construction photographs.
- B. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
 - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- C. Monthly Aerial Photographs: Take monthly aerial photographs to document progress. Take photographs from various viewpoints to document all areas of work. Such photographs shall document actual installed conditions.
- D. Daily Progress Photographs: Take daily photographs to document progress. Take photographs of all work that will be concealed by subsequent construction activity (such as rough electrical, rough plumbing and rough ductwork). Such photographs shall fully document actual installed conditions.
- E. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Date and Time: Include date and time in filename for each image.
 - 2. Field Office Images: Maintain one set of images accessible at the field office at Project site, available at all times for reference. Identify images same as for those submitted to Architect.
- F. 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 Architect.
 - 1. Flag construction limits before taking construction photographs.
 - 2. Take 20 photographs to show existing conditions adjacent to property before starting the Work.
 - 3. Take 20 photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.

4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- G. 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.
- H. Final Completion Construction Photographs: Take 20 color photographs after date of Substantial Completion for submission as Project Record Documents. Architect will direct photographer for desired vantage points.
1. Do not include date stamp.

END OF SECTION 013233

SECTION 013300 SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 01 Section "Photographic Documentation" for submitting construction photographs.
 - 5. Division 01 Section "Quality Requirements" for submitting test and inspection reports.
 - 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. 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 Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. 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

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by

dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Engineer 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. 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.
3. 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.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Engineer's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Engineer for Contractor's use in preparing submittals and project layout.
 1. Engineer will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project layout.
 - a. Engineer makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital Drawing Software Program: The Contract Drawings are available in AutoCAD dwg format.
 - c. Contractor shall execute a data licensing agreement in the form of Agreement included in Project Manual.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 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. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 10 days for review of each resubmittal.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
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 Engineer.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Contractor.
 - d. Name of subcontractor.
 - e. Name of supplier.
 - f. Name of manufacturer.
 - g. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
 - j. Location(s) where product is to be installed, as appropriate.
 - k. Other necessary identification.
 4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will return without review submittals received from sources other than Contractor.
 - a. Transmittal Form for Paper Submittals: Provide locations on form for the

following information:

- 1) Project name.
- 2) Date.
- 3) Destination (To:).
- 4) Source (From:).
- 5) Name of Contractor.
- 6) Name of firm or entity that prepared submittal.
- 7) Names of subcontractor, manufacturer, and supplier.
- 8) Category and type of submittal.
- 9) Submittal purpose and description.
- 10) Specification Section number and title.
- 11) Specification paragraph number or drawing designation and generic name for each of multiple items.
- 12) Drawing number and detail references, as appropriate.
- 13) Indication of full or partial submittal.
- 14) Transmittal number.
- 15) Submittal and transmittal distribution record.
- 16) Remarks.
- 17) Signature of transmitter.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., 10905-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 10905-061000.01.A).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Engineer.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name of Contractor.
 - d. Name of firm or entity that prepared submittal.
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.

- l. Related physical samples submitted directly.
 - m. Indication of full or partial submittal.
 - n. Transmittal number.
 - o. Submittal and transmittal distribution record.
 - p. Other necessary identification.
 - q. Remarks.
- 5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.
- F. Options: Identify options requiring selection by Engineer.
- G. 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 Engineer on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Engineer's action stamp.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer'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. Submit electronic submittals via email as PDF electronic files.
 - a. Engineer will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. Action Submittals: Submit five paper copies of each submittal unless otherwise

- indicated. Engineer will return three copies.
3. Informational Submittals: Submit five paper copies of each submittal unless otherwise indicated. Engineer will return three copies.
 4. 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 one of following formats:
 - a. PDF electronic file.
 - b. Five paper copies of Product Data unless otherwise indicated. Engineer will return three copies.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Engineer'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.
 - 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 one of the following formats:
 - a. PDF electronic file.
 - b. Five opaque copies of each submittal. Engineer will retain two copies; remainder will be returned.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
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 Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Number of Samples: Submit five sets of Samples. Engineer will retain two 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 sets of paired units that show approximate limits of variations.
- E. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- F. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- G. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- H. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- I. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of engineers and owners, and other information specified.
- J. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- K. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- L. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- M. 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.
- N. 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.
- O. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- P. 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.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. 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 ENGINEER'S ACTION

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

discarded.

END OF SECTION 013300

SECTION 014000 QUALITY REQUIREMENTS

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 quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, City, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Divisions 02 through 33 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. **Quality-Assurance Services:** Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. **Quality-Control Services:** Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. **Field Quality-Control Testing:** Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- D. **Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

- E. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- F. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

- A. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.6 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.

2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.7 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

1.8 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested.

Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.

- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

Construction Sign Request Form

Title (Bold):

Title (Not Bold):

What's Happening?

Benefits:

Number of Neighbors Benefitted:

Cost:

Month and Year of Expected Completion:

Contractor:

Phone: 954-828-8000

We're Working On:

Project Manager Signature

Date

Senior Project Manager Signature

Date

SECTION 015900 – PROJECT SIGN

PART 1 GENERAL

Contractor, at contractor’s expense, shall furnish and install a **4’ x 8’** sign (with white painted posts) prior to start of construction. A sample sign template is below but is not specific to the project. The exact style and design of the sign will be provided by the CITY to the Contractor during the preconstruction meeting in PDF format.

City of Fort Lauderdale

Keeping the Ocean in the Ocean
Bringing Drier Streets to Hendricks Isle

What's Happening?
The City of Fort Lauderdale is combating poor roadway drainage resulting from seasonal high tides and major rain events.
www.fortlauderdale.gov

Benefits 5,000 Neighbors

- Improved vehicular access during high tide and rain events
- Better drainage of roadway
- Enhanced neighborhood

Phone
(954) 828-8000

Cost
\$20,000

Completion
August 2013

Contractor
ABC Company

We're Working On:

- Installing interconnected underground catch basins
- Cleaning existing drainage pipes, including the outfall pipes
- Removing and replacing the concrete valley gutters that transport water to the catch basins
- Installing drainage valves to help alleviate flooding from high tides

Fort Lauderdale City Commission

John P. "Jack" Seiler Mayor
Bruce G. Roberts Vice Mayor, District I
Dean J. Trantalis Commissioner, District II
Bobby B. DuBose Commissioner, District III
Romney Rogers Commissioner, District IV
Lee R. Feldman, ICMA-CM City Manager

See Page 2, "Construction Sign Request Form", for information on the sign for this Project.

END OF SECTION

SECTION 017700 CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
1. Substantial Completion procedures.
 2. Final completion procedures.
 3. Warranties.
 4. Final cleaning.
 5. Repair of the Work.
- B. Related Sections include the following:
1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 2. Division 01 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
 3. Division 01 Section "Execution Requirements" for progress cleaning of Project site.
 4. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 5. Divisions 02 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 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 prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. 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, and similar final record information.
 2. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 3. 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 Construction Manager. Label with manufacturer's name and model number where applicable.

- C. Procedures Prior to Substantial Completion: Complete the following prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Terminate and remove temporary facilities from Project site, along with construction tools, and similar elements.
 2. Complete final cleaning requirements, including touchup painting.
 3. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Construction 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 Construction Manager that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection 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.

1.4 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 Construction Manager's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Construction Manager. 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 final releases of lien from all subcontractors and suppliers.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Final payment will only be made after ALL unconditional release of liens from all subcontractors and suppliers are received by the City.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Submit three copies 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. Include the following information at the top of each page:
 - a. Project number and name.
 - b. Date.
 - c. Name of Construction Manager.
 - d. Name of Contractor.
 - e. Page number.
2. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Construction Manager will return annotated file.
 - b. PDF electronic file. Construction Manager will return annotated file.
 - c. Three paper copies. Construction Manager will return two copies.

1.6 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties 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. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. 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.

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.
 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. Sweep concrete floors broom clean in unoccupied spaces.
 - g. Remove labels that are not permanent.

- B. Construction Waste Disposal: Comply with waste disposal requirements in 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 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, or broken reflective surfaces, and other damaged 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.

END OF SECTION 017700

**SECTION 02010
SUBSURFACE INVESTIGATION**

PART 1 - GENERAL

1.01 RESPONSIBILITY

- A. Subsurface explorations have been made and copies of the results are included herein for reference. This information was obtained primarily for use in preparing the design, the Contractor may draw his own conclusions therefrom. No responsibility is assumed by the Owner for subsoil quality or condition other than at the locations, and at the time the exploration was made. No claim for extra compensation or for extension of time will be allowed on account of subsurface conditions inconsistent with the data shown, except as may be provided elsewhere herein.

PART 2 - PRODUCTS

2.01 SOIL BORINGS

- A. Copies of the following are included herein:
1. Soil boring data.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 02110 CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 SCOPE

The work to be performed under this item shall consist of either the clearing of or the clearing and grubbing of the area along the alignment of construction as designated on the drawings.

- A. Clearing - Where clearing only is required it shall consist of the cutting and removal of all trees, stumps, bush, logs, hedges, and the removal of all fences and other loose or projecting material from the designated area. The grubbing of stumps and roots will be required.
- B. Clearing and Grubbing - Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which, in the opinion of ENGINEER, is unsuitable, including grubbing of stumps, roots, matter roots, foundations and disposal from the project of all spoil materials resulting from clearing and grubbing by burning or otherwise.

1.02 REFERENCES

Florida Department of Transportation Standard Specifications for Road and Bridge construction (F.D.O.T.). latest edition.

PART 2 - MATERIALS

2.01 MATERIALS FOR REPLACEMENT

All materials required to be brought on to the site for filling of holes caused by grubbing or otherwise shall be consistent with materials of the surrounding area.

PART 3 - EXECUTION

3.01 SCHEDULE

CONTRACTOR shall schedule the clearing or clearing and grubbing work at a satisfactory distance in advance of the pipe laying operations.

3.02 SPOIL MATERIALS REMOVAL

All materials to be disposed of by removal from the site shall be disposed of by CONTRACTOR at the Contractor's expense. In no case shall any discarded materials be left in piles adjacent to or within the project limits. The manner and location of disposal of

materials shall be subject to review by ENGINEER and shall not create an unsightly or objectionable view.

3.03 CLEARING

Clear the area of all objectionable materials. Trees unavoidably falling outside the specified limits must be cut up, removed, and disposed of in a satisfactory manner. Preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut to a height of not more than 12-inches above the ground. The grubbing of stumps and roots will be required.

Fences shall be removed and disposed of when directed by ENGINEER. Fence wire shall be neatly rolled and the wire and posts stored on the project if they are to be used again, or stored at a designated location if the fence is to remain the property of OWNER.

3.04 CLEARING AND GRUBBING

In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass and other unsatisfactory materials shall be removed.

All holes remaining after the grubbing operation in embankment areas shall have the sides broken down to flatten out the slopes, and shall be filled with acceptable material, moistened and properly compacted in layers to the density required. The same construction procedure shall be applied to all holes remaining after grubbing in excavation areas where the depth of holes exceeds the depth of the proposed excavation.

END OF SECTION

**SECTION 02210
EXCAVATION AND SWALE GRADING**

PART 1 - GENERAL

1.01 SCOPE

This item shall consist of the excavating, removing and satisfactory disposition of all materials required to construct the Project and the placement and shaping of required swales to be done in accordance with these Specifications and in conformity with the dimensions and typical sections, lines, and grades, shown on the Plans.

All suitable material taken from excavation shall be used in the formation of embankment, subgrade and for backfilling as indicated on the Plans or hauled off-site, or as directed by the ENGINEER. When the volume of excavation is not sufficient for construction of the fill to the grades indicated, the deficiency shall be supplied by the Contractor.

1.02 REFERENCES

Standards applicable to these specifications shall be:

- A. Americans Association of State Highway and Transportation Officials (AASHTO).
- B. Florida Department of Transportation (F.D.O.T.) Section 120 "Excavation and Embankment". from the Standards Specification for Road & Bridge Construction book

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION OF WORK

3.01 EXCAVATION

The rough excavation shall be carried to the necessary depth to obtain the specified depth of subgrade compaction shown on the Plans. Likewise, on embankments, the depth of subgrade compaction shall be as shown on the Plans.

Should the CONTRACTOR, through negligence or other fault, excavate below the designated lines, he shall replace the excavation with approved materials, in an approved manner and condition, at this own expense. The ENGINEER shall have complete control over the interpretation of the Plans and Specifications concerning the excavation, moving, placing and disposal of all material and shall determine the suitability of material to be placed in embankments. All material determined unsuitable shall be disposed of in waste areas or as directed. Topsoil shall not be used in fill or in subgrades but shall be handled and placed as directed.

The CONTRACTOR shall inform and satisfy himself as to the character, quantity, and distribution of all material to be excavated. No payment will be made for any excavated material which is used for purposes other than those designated. All spoil areas shall be leveled to a uniform line and section and shall present a neat appearance before project acceptance.

Those areas outside of the pavement areas in which the top layer of soil material becomes compacted, due to hauling or to any other activity of the CONTRACTOR, shall be scarified to a depth of 4-inches, as directed, to loosen and pulverize the soil.

If it is necessary to interrupt existing irrigation systems, sewers or under drainage conduits, utilities or similar underground structures, or parts thereof, the CONTRACTOR shall be responsible for and shall take all necessary precautions to protect and preserve or provide temporary services. When such facilities are encountered, the CONTRACTOR shall, at his own expense, satisfactorily repair all damage to such facilities or structures which may result from any of his operations during the period of the contract.

3.02 SWALE EXCAVATION

Swale excavation shall consist of excavating for drainage swales such as intercepting, inlet or outlet or any other type as designed or shown on the Plans.

The work shall be performed in the proper sequence with the other construction. The location of all ditches shall be established on the ground. All satisfactory material shall be placed in fills; unsatisfactory material shall be placed in spoil areas or as directed. Waste or surplus material shall be disposed of as directed by the ENGINEER. All necessary handwork shall be performed to secure a finish true to line, elevation, and cross section, as designated.

Swales constructed on the project shall be maintained to the required cross section and shall be kept free from debris or obstructions until the project is accepted.

3.03 STRIPPING

All vegetation such as brush, heavy sods, heavy growth of grass, decayed vegetable matter, rubbish and any other unsuitable material within the area upon which embankment is to be placed shall be stripped or otherwise removed before the embankment is started, and in no case shall such objectionable material be allowed in or under the embankment.

END OF SECTION

SECTION 02211 SITE GRADING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Remove topsoil and stockpile on site for later use.
- B. Excavate sub-soil and reform to grades, contours and levels.
- C. Excavate or fill for roadways, walks, curbs, gutters, parking areas, landscaped areas and as shown on the Drawings.

1.02 RELATED WORK

- A. Section 02110: Clearing and Grubbing.
- B. Section 02210: Excavation and Swale Grading.
- C. Section 02220: Trenching, Backfilling and Compacting.
- D. Section 02260: Finish Grading.
- E. Section 02513: Asphaltic Concrete Paving.

1.03 EXISTING CONDITIONS

- A. Known underground, surface and aerial utility lines, and buried objects are based on best available data and indicated on the Drawings. Contractor shall verify all locations.

1.04 PROTECTION

- A. Protect trees, shrubs and lawns and other features remaining as part of final landscaping.
- B. Protect bench marks, and existing structures, fences, roads, sidewalks, paving and curbs against damage from equipment and vehicular traffic.
- C. Protect aerial, surface, or underground utility lines or appurtenance which are to remain.
- D. Repair any damage, at no cost to Owner.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Excavated fill material: Soil free from roots, rocks larger than 3-inches, and building debris.

- B. Additional fill material: Shall be approved by the Engineer.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Establish and identify required lines, levels, contours and datum.
- B. Maintain bench marks, monuments, and other reference points. Re-establish if disturbed or destroyed, at no cost to Owner.
- C. Before start of grading, establish the location and extent of utilities in the work areas. Notify utilities to remove and relocate lines which are in the way of construction.
- D. Maintain, protect, reroute or extend as required existing utilities to remain which pass through the work area.

3.02 REMOVAL OF TOPSOIL

- A. Topsoil of horticultural value shall be stripped from areas of construction under this contract and stockpiled in area designated by Engineer. Said material shall be stockpiled separately from fill material.
- B. Do not permit topsoil to be mixed with subsoil
- C. Do not strip topsoil when wet.
- D. Do not drive heavy equipment over stockpiled topsoil.

3.03 ROUGH GRADING

- A. Rough grade site to required levels, profiles, contours and elevations ready for finish grading and surface treatment. Maintain the following:
 - 1. Sodded areas - 4 1/2-inches below finished grade elevation.
 - 2. Seeded areas - 6-inches below finished grade.
 - 3. Paved areas - 18-inches below finished grade elevations.
 - 4. Shrub beds - 24-inches below finished grade elevations.
 - 5. Flower beds - 18-inches below finished grade elevations.
 - 6. Concrete sidewalks - 8-inches below finished grade elevations.
- B. Prior to placing fill material over undisturbed subsoil, scarify surface to depth of 6-inches.

3.04 SURPLUS MATERIAL

- A. Remove surplus materials from site.

- B. Dispose of surplus material at no cost to Owner.

END OF SECTION

SECTION 02260 FINISH GRADING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall, under this Section, supply, place, compact and roll finish grade materials prior to landscaping work.
- B. Finish grade sub-soil.
- C. Cut out areas to receive stabilizing base course materials for paving and sidewalks.
- D. Place, finish grade and compact topsoil.

1.02 RELATED WORK

- A. Section 02210: Excavation and Swale Grading.
- B. Section 02211: Site Grading.
- C. Section 02220: Trenching, Backfilling and Compacting.
- D. Section 02934: Sodding.

1.03 PROTECTION

The Contractor shall prevent damage to existing fencing, trees, landscaping, natural features, bench marks, pavement, utility lines, and sprinkler system. Correct damage at no cost to the Owner.

PART 2 - PRODUCTS

2.01 MATERIALS

Topsoil shall be friable loam free from subsoil, roots, grass, excessive amount of weeds, stones and foreign matter; acidity range (ph) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. (Use topsoil stockpiled on site if conforming to these requirements, or as directed by the Engineer.)

PART 3 - EXECUTION

3.01 SUB-SOIL PREPARATION

- A. Rough grade sub-soil systematically to allow for a maximum amount of natural settlement and compaction. Eliminate uneven areas and low spots. Remove debris,

roots, branches, stones, etc., in excess of 2 inches in size. Remove sub-soil which has been contaminated with petroleum products.

- B. Cut out areas, to sub-grade elevation, which are to receive stabilizing base for paving and sidewalks.
- C. Bring sub-soil to required levels, profiles and contours. Make changes in grade gradual. Blend slopes in to level areas.
- D. Slope grade away from building minimum 4 inches in 10 feet (unless indicated otherwise on Drawings).

3.02 PLACING TOPSOIL

- A. Place topsoil in area where seeding, sodding and planting is to be performed. Place to the following minimum depths, up to finished grade elevations:
 - 1. 6-inches for seeded areas.
 - 2. 4 1/2-inches for sodded areas.
 - 3. 24-inches for shrub beds.
 - 4. 18-inches for flower beds.
- B. Use topsoil in relatively dry state. Place during dry weather.
- C. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles and contours of sub-grades.
- D. Remove stones, roots, grass, weeds, debris and other foreign material while spreading.
- E. Manually spread topsoil around trees, plants, buildings and other structures to prevent damage which may be caused by grading equipment.
- F. Lightly compact placed topsoil.

3.03 SURPLUS MATERIAL

- A. Remove surplus sub-soil and topsoil from site.
- B. Leave stockpile areas and entire job site clean and raked, ready to receive landscaping.

END OF SECTION

SECTION 02262 STEEL SHEET PILES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This section covers all members to be used in the construction of steel sheet pile. This SPECIFICATION also covers the installation of steel sheet piling and trimming of the sheet pile to the lines and grades shown on the DRAWINGS or as required. This WORK also includes pre-drilling to facilitate driving sheet pile to the designated elevations.

1.2 RELATED SECTIONS

- A. The following is a list of SPECIFICATIONS which may be related to this section:
1. Section 01 57 19, Temporary Environmental Controls
 2. Section 31 23 00, Excavation and Fill.
 3. Section 31 23 19, Dewatering.
 4. Section 31 23 33, Trenching and Backfilling.
 5. Section 31 25 00, Erosion and Sedimentation Controls

1.3 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
1. American Concrete Institute (ACI): 318/318R, Building Code Requirements for Structural Concrete and Commentary.
 2. American Petroleum Institute (API): Spec 5L, Specification for Line Pipe.
 3. ASTM International (ASTM):
 - a. A36, Standard Specification for Carbon Structural Steel.
 - b. A53, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - c. A139, Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe (NPS 4 and Over).
 - d. A252, Standard Specification for Welded and Seamless Steel Pipe Piles.
 - e. A328, Standard Specification for Steel Sheet Piling.
 - f. A572, Standard Specification for High-Strength Low-Alloy Columbium-

Vanadium Structural Steel.

- g. A690, Standard Specification for High-Strength Low-Alloy Nickel, Copper, Phosphorus Steel H-Piles and Sheet Piling with Atmospheric Corrosion Resistance for Use in Marine Environments.
- h. A1011/A1011M, Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
 - 4. American Water Works Association (AWWA):
 - a. C200, Steel Water Pipe—6 in. (50 mm) and Larger.
 - 5. American Welding Society (AWS):
 - a. D1.1, Structural Welding Code—Steel.

1.4 SUBMITTALS

- A. Steel Sheet Piles shall be designed by a Professional Engineer in the State of Florida for the loads and criteria specified on the DRAWINGS. Signed and Sealed calculations shall be submitted for review.
- B. Provide qualifications of proposed sheet pile installer.
- C. CONTRACTOR shall provide information from the manufacturer that indicates the sheet piling meets or exceeds the SPECIFICATIONS listed in this section.
- D. CONTRACTOR shall submit verification from the manufacturer that the hammer can deliver the required energy.
- E. Splice locations, if necessary, shall be reviewed and accepted by ENGINEER prior to installation.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Sheet piling installer shall have, as a minimum, three (3) successful past installations of sheet piling of comparable overall heights and sections and comparable penetration into soils similar to those found on the PROJECT.

PART 2 PRODUCTS

2.1 GENERAL

- A. All steel sheet piling shall be new and unspliced material throughout, unless otherwise reviewed and accepted by ENGINEER.
- B. Steel sheet piles and special fabricated shapes shall be of a design that ensures continuous interlock throughout the entire length when in place.

2.2 MATERIALS

- A. Steel sheet piling shall meet the requirements of ASTM A328, (Grade 50).
- B. Steel corners, tees, wyes, and crosses shall meet the requirements of ASTM A328 or ASTM A690.
- C. Steel sheet piles required for the PROJECT shall be the type and weight shown on the DRAWINGS. Sheet piling shall be constructed with a weathering finish.
 1. Additional length beyond those indicated on the DRAWINGS may be required to provide for trimming of tops of sheet piling.
- D. The interlocks between steel sheet pile sections shall be configured such that the average width of the annular space between all contact points of the interlocks shall be a maximum of one-eighth (1/8) inch, as determined by ENGINEER.
- E. Steel sheet piles and interlocks shall not have excessive kinks, camber or twist that would prevent the pile from reasonably free sliding to grade.
- F. All fabricated connections shall be made with the use of angles or bent plates, as necessary, and shall be adequately welded or connected with high strength bolts as accepted by ENGINEER.
- G. Handling Holes:
 1. If handling holes are provided, they shall be two (2) standard two and nine-sixteenth (2-9/16) inch diameter handling holes located six (6) inches from one end.
 2. The holes shall be plugged by welding a piece of steel over the hole prior to installing any riprap, backfill or drop structure cap.
 3. The plated hole shall be watertight.

2.3 STORAGE AND HANDLING

1. Do not subject piles to damage by impact bending stresses in transporting to and storing piles onsite.
2. Store and handle piles such that corrosion protection coating will not be damaged.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin sheet pile installation until the earthwork in the area where the piles are to be driven has been completed to the extent that the grade elevation is at no more than twelve (12) inches above or below the top of the piling elevation as indicated on the DRAWINGS.

3.2 PREPARATION

- A. Any fill along the alignment of the sheet pile must be in place to sub-grade elevations and compacted prior to driving the sheet pile.
- B. Fill material (except riprap, boulders, bedding and grout) is not to be placed around the sheet pile after the sheet pile is in place.

3.3 INSTALLATION

- A. General:
 - 1. All welding or gas cutting shall be in accordance with the current standards of the American Welding Society.
 - 2. Virtual Refusal:
 - a. Steel sheet piling shall be driven to the depths shown on the DRAWINGS or to virtual refusal.
 - b. Virtual refusal is defined as ten (10) blows per inch with an approved pile hammer.
 - c. A pile hammer shall be used to determine virtual refusal.
 - d. The hammer shall be operating at the manufacturer's recommended stroke and speed when virtual refusal is measured.
- B. Sheet Piling Driving:
 - 1. Steel sheet piling shall be assembled before driving and then driven as a continuous wall, progressively in stages to keep the piles aligned correctly and minimize the danger of breaking the interlock between the sheets.
 - 2. Steel sheet piling shall be driven to form a tight bulkhead.
 - 3. A driving head shall be used and any piling which is damaged in driving or which has broken interlocks between sections shall be pulled and replaced at CONTRACTOR's expense.
 - 4. The piling shall be driven within the following tolerances:
 - a. Alignment:
 - 1) Sheet pile shall be driven to form a relatively straight line between the termini points shown on the DRAWINGS.
 - 2) Horizontal deviation of any point from a straight line connecting the two ends of the wall section shall be a maximum of six (6) inches.
 - b. Plumbness: Each individual sheet pile section shall be driven vertical, within a horizontal tolerance of two percent (2%) of any vertical length measured along the pile.

- c. Elevation:
- 1) Tops of sheet pile sections shall be within a tolerance of one (1) inch from plan elevations.
 - 2) CONTRACTOR shall not be paid for excess sheet pile trimmed off the end of the pile to meet final grade.
- C. CONTRACTOR shall brace and/or provide soil grading as necessary during construction operations in order to provide lateral stability for the sheet pile wall. The sheet pile wall has been designed for the soil grades of the final configuration denoted on the DRAWINGS only. Other temporary configurations during the construction period shall not be allowed.
- D. Care shall be taken during driving to keep from causing deformations of the top of the piles, splitting of section, or breaking of the interlock between sections. Care shall also be taken during driving to prevent and correct any tendency of steel sheet piles to twist or get out of plumb.
- E. Steel Z piling shall be driven with the ball-end leading. Proper care and planning shall be used to allow for this construction procedure in both immediate and possible future walls.
- F. Alternate Z piles shall be reversed end for end for proper interlocking in the "normal" position. Piles shall also be aligned properly to maintain a "normal" driving width.
- G. For sheet piles driven into the native soils, pre-drilled soils, or excavated soils a vibratory driver may be used as long as the required depth is obtained.
- H. For sheet piles being driven into bedrock, an approved hammer utilizing a minimum hammer energy of 19,000 foot-pounds per square inch of steel section shall be used to obtain the required depth or virtual refusal. The hammer shall be clearly marked so that it can be identified at the job site.
- I. Steel sheet pile that is full length as shown on the DRAWINGS and is required to be driven below the specified cutoff elevation shall be spliced with additional steel sheet piling with a full penetration butt weld.

END OF SECTION

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**SECTION 02370
RIPRAP**

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: The CONTRACTOR shall furnish all labor, equipment and materials necessary for the proper placement of stone riprap, bedding stone and filter fabric where indicated, including temporary riprap for bypass channel(s), as required by the Contract Documents.
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 – Submittals

1.02 APPLICABLE STANDARDS AND PUBLICATIONS:

- A. Standards or Codes: The edition of the standards of the organizations listed below in effect at the time of the advertisement for bids form a part of this specification to the extent referenced. In the case of a conflict between the requirements of this SECTION and those of the listed document, the requirements of this SECTION shall prevail.
 - 1. American Society for Testing and Materials (ASTM):
 - a. C88 - Standard Test Method for Soundness of Aggregate by use of Sodium Sulfate or Magnesium Sulfate.
 - b. C127 - Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Course Aggregate
 - c. C535 - Standard Test Method for Resistance to Degradation of Large Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
 - 2. American Association of State Highway and Transportation Officials (AASHTO)
 - a. T 85 Standard Method of Test for Specific Gravity and Absorption of Coarse Aggregate
 - b. T 120 Method of Test for Aggregate Durability Index
 - 3. Florida Department of Transportation (FDOT)
 - a. Standard Specifications for Road and Bridge Construction, latest edition
 - i. 514 – Standard Specification for Plastic Filter Fabric (Geotextile)
 - ii. 901 – Standard Specifications for Coarse Aggregate
 - b. Florida Methods
 - i. 3-C-535 - Resistance to Degradation of Large-Size Coarse Aggregates by Abrasion and Impact in the Los Angeles Machine
 - ii. 5-538 – Sampling and Testing Rip-Rap Material

1.03 **DEFINITIONS: (Not Used)**1.04 **SUBMITTALS:**

- A. Submittals shall be in accordance with SECTION 01300.
- B. The CONTRACTOR shall furnish, testing certificates from a qualified independent testing laboratory prior to acceptance of the rock source to verify the conformity to the requirements of the Contract Documents.

1.05 **QUALIFICATIONS: (Not Used)**1.06 **RESPONSIBILITIES: (Not Used)**1.07 **CERTIFICATIONS:**

- A. Test Reports: The CONTRACTOR's riprap supplier shall submit certified test reports prepared by a qualified independent testing laboratory selected and compensated by CONTRACTOR for the tests required in Article 2.01 B of this SECTION. The table shown below specifies the minimum number of tests for each Project to establish quality control during the processing of a single 2,500-ton stockpile.

| Test Required | Number of Tests | Test Method |
|------------------|-----------------|------------------------|
| Specific Gravity | 2 | ASTM C127 |
| Absorption | 2 | ASTM C127, AASHTO T 85 |
| Soundness | 2 | ASTM C88 |
| Durability Index | 2 | AASHTO T 210 |
| L.A. Abrasion | 2 | FM 3-C 535 |
| Gradation | 1 | FM 5-538 |

- B. Filter Fabric: The CONTRACTOR shall submit MANUFACTURER's data for filter fabric demonstrating compliance with specified material properties, and including MANUFACTURER's recommendations for storage, handling, installation, and anchoring fabric.

1.08 **INSPECTION COORDINATION:**

- A. The CONTRACTOR shall provide access to the WORK for the OWNER as requested for inspection. The CONTRACTOR shall provide the OWNER at least 48 hours advance notice of its intention to begin new WORK activities.

1.09 **WARRANTY:**

- A. The MANUFACTURER shall warrant the MATERIALS and PRODUCTS specified in this SECTION against defective materials and workmanship with the MANUFACTURER's standard warranty, but for no less than one (1) year from the date of Substantial Completion, and as described in Article 13 of Section 00700 - General Terms and Conditions.

- B. The CONTRACTOR shall warrant the WORK against defects for one (1) year from the date of Substantial Completion and as described in Article 13 of Section 00700 - General Terms and Conditions.

PART 2 - MATERIALS

2.01 RIPRAP:

The CONTRACTOR shall furnish stone for riprap that is sound, durable and angular in shape. No more than 10% of the stone for any gradation shall have an elongation (ratio of greatest dimension to least dimension) greater than 3:1, and no stone shall have an elongation greater than 4:1. The riprap material shall be provided by a Florida Department of Transportation (FDOT) certified pit or from onsite excavations **[NTS: The Designer shall test the limestone obtained onsite to verify if it meets the requirements]** and conform to the following additional requirements.

- A. Material shall be free from cracks, seams, non- mineralized or other defects that would tend to increase its deterioration from natural causes. Riprap shall consist of dense, natural rock fragments. Stones shall be resistant to weathering and to water action; free from overburden, spoil, shale and organic material; and shall meet the gradation requirements below. Shale and stones with shale seams are not acceptable.
- B. Stone for riprap shall have the following properties:
 1. Bulk specific gravity (saturated surface-dry basis) not less than 2.38 when tested by ASTM C127 for gradations A, B, and C, and D.
 2. The minimum apparent specific gravity of the stones shall be 2.5 as determined by AASHTO T 85.
 3. Absorption of not more than 5.0% when tested by ASTM C127.
 4. Soundness: Soundness of stone shall be determined in accordance with ASTM C88, modified as specified herein. Weight loss in five (5) cycles shall be not more than 10% when sodium sulfate is used or 15% when magnesium sulfate is used.
 5. Stones shall consist of durable, sound, hard, angular rock meeting the following requirements for durability absorption ratio, soundness test, and abrasion test:

| <u>Durability Absorption Ratio</u> | <u>Acceptability</u> |
|------------------------------------|--|
| Greater than 23 | Passes |
| 10 to 23 | Passes only if Durability Index is 52 or greater |
| Less than 10 | Fails |

$$\text{Durability Absorption Ratio} = \frac{\text{Durability Index (Coarse)}}{\% \text{ absorption} + 1}$$

6. The durability index and percent absorption shall be determined by AASHTO T 210 and AASHTO T 85, respectively. The minimum apparent specific gravity of the stones shall be 2.5 as determined by AASHTO T 85.
7. Stones shall have less than ten (10) percent loss of weight after five (5) cycles, when tested per ASTM C88.

- 8. Stones shall have a wear not greater than 40 percent, when tested per ASTM C535.
- 9. Stone gradation based on a representative sample of not less than 2.0 cubic yards. Each stone in the sample shall be individually weighed, and a cumulative plot of percent lighter (by weight) versus stone weight in pounds shall be submitted.

C. The riprap shall be graded as follows:

[NST: ENGINEER to determine which Type A, B, C and/or D. The riprap layer thickness should not be less than the spherical diameter of the D100 (W100) stone, or less than 1.5 times the spherical diameter of the D50 (W50) stone, whichever results in the greater thickness. It should not be less than twelve (12) inches for practical placement. The thickness should be increased by 50 percent when the riprap is placed underwater to provide for uncertainties associated with this type of placement. The thickness should be increased by six (6) to twelve (12) inches, accompanied by increase in stone size, should the riprap revetment be subject to damage by floating debris, waves from boat wakes or wind]

| Type A (6-inch Average Size) | | |
|------------------------------|---------|---------------------------|
| Sieve Size | | Percent Passing by Weight |
| Maximum | Minimum | |
| 12" | 9" | 100 |
| 8" | 7" | 50 |
| 6" | 5" | 15 |

| Type B (12-inch Average Size) | | |
|-------------------------------|---------|---------------------------|
| Sieve Size | | Percent Passing by Weight |
| Maximum | Minimum | |
| 21" | 15" | 100 |
| 14" | 12" | 50 |
| 11" | 8" | 15 |

| Type C (18-inch Average Size) | | |
|-------------------------------|---------|---------------------------|
| Sieve Size | | Percent Passing by Weight |
| Maximum | Minimum | |
| 30" | 22" | 100 |
| 20" | 18" | 50 |
| 16" | 12" | 15 |

| Type D (24-inch Average Size) | | |
|-------------------------------|---------|---------------------------|
| Sieve Size | | Percent Passing by Weight |
| Maximum | Minimum | |
| 42" | 31" | 100 |
| 28" | 24" | 50 |
| 22" | 17" | 15 |

- D. Control of gradation shall be by visual inspection. The CONTRACTOR shall furnish a sample of the proposed gradation of at least five (5) tons or ten (10) percent of the total

riprap weight, whichever is less. If approved, the sample may be incorporated into the finished riprap at a location where it can be used as a frequent reference for judging the gradation of the remainder of riprap. Any difference of opinion shall be resolved by dumping and checking the gradation of two (2) random truckloads of stones. Arranging for and the costs of mechanical equipment, a sorting site, and labor needed in checking gradation shall be the CONTRACTOR's responsibility.

- E. The acceptability of the stones will be determined by the OWNER prior to placement.

2.02 GRANULAR BEDDING:

The CONTRACTOR shall place a layer of bedding material beneath the riprap materials to the lines and grades shown on the Drawings. Stone for use in granular bedding shall weigh not less than 135 lbs/cf (saturated surface dry – pounds/cubic foot). The material shall be composed of tough, durable particles, shall be reasonably free from thin, flat and elongated pieces, and shall contain neither organic matter nor soft, friable particles in quantities considered objectionable by the OWNER. Bedding stone shall be placed within the limits shown on the Drawings and shall be reasonably well graded in accordance with FDOT Section 901. The bedding stone for each type of riprap shall be as follows:

| Type of Riprap | Bedding Stone |
|----------------|-----------------------|
| Type A | ASTM C33 Size No. 57 |
| Type B | ASTM C33 Size No. 357 |
| Type C | ASTM C33 Size No. 2 |
| Type D | ASTM C33 Size No. 1 |

2.03 FILTER FABRIC:

The CONTRACTOR shall provide a twelve (12) ounce per square yard, non-woven, needle-punched geotextile (filter) fabric conforming to the following properties:

| Criteria | Minimum Average Roll Value |
|-----------------------------------|--------------------------------------|
| Permittivity (sec ⁻¹) | 0.7 (<15% passing 200 Sieve) |
| | 0.2 (>15% to <50% passing 200 Sieve) |
| Minimum Grab Tensile Strength | 1.1 kN |
| Minimum Sewn Strength | 0.99 kN |
| Minimum Puncture Strength | 0.4 kN |
| Minimum Trapezoidal Tear | 0.25 kN |
| UV Resistance | 50% in 500 hours |

2.04 TEMPORARY RIPRAP:

- A. The CONTRACTOR shall furnish temporary riprap as indicated on the Drawings conforming to the requirements of Part 2 of this SECTION for Type B.

PART 3 - PERFORMANCE**3.01 FIELD QUALITY CONTROL:**

- A. The CONTRACTOR shall recombine the riprap stone sample used for gradation analysis, transport to the Project Site, and place in a location acceptable to the OWNER. Field control of riprap gradation will be by visual comparison of the representative sample to arriving loads. Arriving loads not bearing reasonable similarity to the sample will be rejected.
 - 1. The CONTRACTOR may, at his option, arrange for gradation analysis of rejected loads at the Project Site. Should the analysis indicate the rejected stone meets the requirements of this SECTION; all reasonable costs for such analysis will be reimbursed to the CONTRACTOR. In no instance will stone of a coloration or appearance dissimilar to that in the sample be accepted.

3.02 SUBGRADE PREPARATION:

- A. Dry Installation: The CONTRACTOR shall prepare the subgrade to the lines, slopes and elevations indicated on the Drawing. The CONTRACTOR shall clear the subgrade of sticks, stones, debris and other materials that could puncture the overlying filter fabric. The finished subgrade shall not vary from design grade by more than two (2) inches at any location.
- B. Subaqueous Installation: The CONTRACTOR shall excavate the subgrade to the lines and grades shown on the Drawing. Tolerance shall be plus 0.0 feet to minus 0.5 feet in the Canal invert, and plus or minus 0.5 feet on the Canal banks.

3.03 FILTER FABRIC:

- A. . Filter fabric shall be placed only on subgrade approved by the OWNER.
- B. Overlap adjacent strips of fabric a minimum of twelve (12) inches, and anchor them with securing pins inserted through both strips of fabric along a line through the midpoint of overlap and to the extent necessary to prevent displacement of the fabric. Securing pins shall be as per the MANUFACTURER's recommendations. The CONTRACTOR may opt for a six (6) inch stitched overlap.
- C. Place the fabric so that the upstream strip of fabric overlaps the downstream strip.
- D. The fabric shall be placed on the entire slope, continuous from top to bottom, without any joints or splices.
- E. Do not drop bedding stone or riprap from heights greater than three (3) feet onto the fabric.

3.04 GRANULAR BEDDING:

The CONTRACTOR shall place bedding material beneath the riprap, to a nominal depth of six (6) inches.

- A. Bedding material shall be spread uniformly over filter fabric material. Placement shall not commence until the subgrade preparation and filter fabric installation is approved.
- B. Placement methods, which segregate the bedding particles, will not be permitted.
- C. Compaction of the bedding material will not be required, but material shall be finished to a reasonably even surface.
- D. Tolerance shall be + three-tenths foot provided this tolerance is not continuous over an area greater than 200 square feet when placed in the dry, or greater than 400 square feet when placed subaqueous.
- E. The CONTRACTOR shall maintain the bedding material until the riprap is in place.

3.05 RIPRAP:

The CONTRACTOR shall proceed placing the riprap upon completion of filter fabric and bedding material (where required) and after receiving approval to proceed. The CONTRACTOR shall place riprap in accordance with the following.

- A. Stone shall be placed in such a manner as to produce a reasonably well-graded mass with the minimum practicable percentage of voids.
 - 1. Place to full course thickness in one operation in a manner to avoid displacing or puncturing filter fabric.
 - a. Stone shall not be dropped from a height greater than three (3) feet above the fabric.
 - 2. Finished riprap shall be free from objectionable pockets of small stones and clusters of larger stones. Hand place or adjust if necessary to secure the desired results, to the satisfaction of the OWNER.
- B. Surface Tolerances:
 - 1. Dry Installation: The finished stone surface shall not vary from design grade by more than three (3) inches at any location, except that any extreme of the tolerance shall not be continuous over an area greater than 100 square feet.
 - 2. Subaqueous Installation: The finished stone surface shall not vary from design grade by more than plus one foot, minus one-half feet at any location; either extreme of the tolerance shall not be continuous over an area greater than 225 square feet.

3.06 MAINTENANCE:

- A. The CONTRACTOR shall maintain the riprap until accepted by the OWNER. The CONTRACTOR shall replace riprap displaced by any cause prior to acceptance.

END OF SECTION

SECTION 02401 DEWATERING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Work covered by this Section consists of furnishing all permits, labor, equipment, appliances and materials, and performing all operations required for dewatering excavations as required to ensure that all work is performed in the dry.
- B. The Contractor shall not discharge water from dewatering operations in any manner that will:
 - 1. Adversely affect the water quality of adjoining water bodies.
 - 2. Violate federal, state or local laws and regulations.
 - 3. Allow discharge to flow onto private property.
 - 4. Hamper the movement of traffic.
 - 5. Damage portions of the work previously constructed.

1.02 STATUTORY REQUIREMENTS

- A. All State and local permits associated with the dewatering are the responsibility of the Contractor. Obtain and pay for all permits required for temporary dewatering systems. Contractor will need to secure Dewatering Permit for this project from SFWMD within 30 days of Notice to Proceed.
- B. Compliance with the Florida Department of Environmental Protection's Generic Permit for the discharge of Produced Ground Water from a Non-Contaminated Site Activity (FDEP Document No. 62-621.300 (2)) shall be required for any dewatering operations.
- C. Original permits shall be prominently displayed on the site prior to constructing dewatering systems.

1.03 RELATED WORK

- A. Section 01410 - Testing Laboratory Services
- B. Section 02225 – Trench, Backfill and Compaction
- C. Section 02610 - Pipe and Fittings

1.04 SUBMITTALS

- A. Administrative Submittals: Discharge permits.
- B. Shop Drawings:
 - 1. Water Control Plan, including dewatering pumps, stilling basin, and means of sound attenuation.

1.05 WATER CONTROL PLAN

- A. As a minimum, include descriptions of proposed groundwater and surface water control facilities including, but not limited to, equipment, methods, standby equipment and power supply, pollution control facilities, and discharge locations to be utilized as required by this Section.

PART 2 - PRODUCTS**2.01 PUMP DRIVERS**

- A. Sound attenuated pumps as manufactured by Thompson Pumps with "Silent Knight" canopy, or approved equal shall be used for all dewatering activities that require a pumping system. Contractor shall demonstrate, measure and record the sound, in decibels (dB), levels at the time of initial set-up. The Contractor shall record the sound levels weekly.

PART 3 - EXECUTION

- A. The Contractor's proposed method for dewatering pipe trenches and manhole excavations shall be reviewed by the Engineer prior to instituting any such operations. Methods may include wellpoints, sump pumps, bedding rock or other methods approved by the Engineer. The Contractor is responsible for means and methods of construction dewatering activities.
- B. In areas of deep trench where dewatering and maintenance of vehicular traffic is required, the Contractor shall bench down the sides of the trench in order to cover the dewatering well point heads with temporary steel plating.

- C. The Contractor shall provide all labor, materials, tools and equipment necessary to properly control the quality of the discharge from dewatering operations. The Contractor shall comply with all applicable laws, rules and regulations governing the discharge of water from dewatering operations.
- D. The impact of anticipated subsurface soil/water conditions shall be considered when selecting methods of excavation and temporary dewatering and drainage systems. Where groundwater levels are above the proposed bottoms of excavations, a pumped dewatering system is expected for pre-drainage of the soils prior to excavation to final grade and for maintenance of the lowered groundwater level until construction has been completed to such an extent that the foundation, structure, pipe, conduit, or fill will not be floated or otherwise damaged. Type of dewatering system, spacing of dewatering units and other details of the work are expected to vary with soil/water conditions at a particular location.
- E. The Contractor is responsible for controlling the bacteriological quality of well point discharges into existing bodies of water. The maximum allowable level for fecal coliform in the wellpoint discharge is a mean MPN of 14 per 100 ML with not more than ten percent (10%) of the samples exceeding an MPN of 43 per 100 ML.
- F. Protection of Property - Contractor shall make an assessment for dewatering induced settlement and shall provide devices or systems, including but not limited to re-injection wells, infiltration trenches and cutoff walls, necessary to prevent damage to existing facilities, completed Work and adjacent facilities.
- G. Control surface water and groundwater such that excavation to final grade is made in the dry, and bearing soils are maintained undisturbed. Prevent softening, or instability of, or disturbance to, the sub-grade due to water seepage.
- H. Provide protection against flotation for all work.
- I. Wellpoints shall not be set in such a way that undermines or jeopardizes paved areas; if the setting of wellpoints undermines or impacts paved areas, the impacted areas shall be removed and restored equal to or better than their original condition at the expense of the Contractor.
- J. Pipe and conduit shall not be installed in water or allowed to be submerged prior to backfilling. Pipe and conduit which becomes submerged shall be removed and the excavation dewatered and restored to proper conditions prior to reinstalling the pipe and conduit.
- K. Collect and properly dispose of all discharge water from dewatering and drainage systems in accordance with State and local requirements and permits. As a minimum, no discharge or run-off of groundwater or surface water that is contaminated with any petroleum products (gasoline, diesel fuel, oil, grease, hydraulic fluid, etc.) and/or sanitary waste shall be made to surface water systems such as lakes, rivers, streams, the Intracoastal Waterway or "on-site" retention ponds that secondarily discharge to these surface water systems.
- L. Dewatering systems shall be designed to allow for localized variations in the depths of the excavations.

- M. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of sub-grades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- N. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rainwater and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.
- O. As the wellpoints are withdrawn, the locations of the voided areas shall backfilled by jetting approved backfill material into the voids until they are completely filled. These restored wellpoint voids are subject to random density verification testing.
- P. Provide adequate noise attenuation enclosure around all engine generator pumping equipment and comply with City's Noise Ordinance. Dewatering pumps shall have mitigation measures to meet the City's Noise Ordinance: During such periods of normal construction hours of 7:00 am to 6:00 pm on Monday through Friday, the noise levels generated by construction activities shall not exceed 75 dBA for more than 10 percent of the time when measured at a distance of 50 feet from the construction site. The Contractor will be required to construct additional sound attenuation means to achieve compliance with the City's Noise Ordinance.

END OF SECTION

**SECTION 02950
TREES, PLANTS & GROUND COVER**

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall furnish all labor, materials, equipment and transportation required to complete the planting as shown on the Drawings, and as specified under this item.
- B. Trees, plants, and ground cover.
- C. Topsoil bedding.
- D. Temporary support.
- E. Mulching.
- F. Maintenance service.

1.02 RELATED WORK

- A. Section 02260: Finish Grading.
- B. Section 02486: Sodding.

1.03 QUALITY ASSURANCE

- A. The Contractor shall only perform work with personnel experienced in the work required of this Section under direction of a skilled foreman.

1.04 DELIVER, STORAGE AND HANDLING

- A. Insofar as is practicable plant material shall be planted on the day of delivery. In the event this is not possible the Contractor shall protect that stock not planted.
- B. Protect plants at all times from sun or drying winds. Plants that cannot be planted immediately on delivery shall be kept in the shade, well protected with soil, wet moss or other acceptable materials, and shall be kept well watered. Plants shall not remain unplanted for longer than three days after delivery.
- C. Plants shall not be bound with wire or rope at anytime so as to damage the bark or break branches. Plants shall be lifted and handled from the bottom of the ball only.
- D. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations.

1.05 GUARANTEE

- A. All plants shall be guaranteed by the Contractor to be in a good, healthy and flourishing condition. The guarantee period shall be for one year from the date of formal written acceptance of this section of the contract completed in all respects in accordance with the Drawings and Specifications.
- B. The Contractor shall remove and replace, at his expense and within the planting periods herein before specified, all dead plants, all plants not in a vigorous and thriving condition, all plants which are so injured or damaged as to render them unsuitable for the purpose intended. Plants shall be free of dead or dying branches and branch tips, and shall bear foliage of the normal density, size species, variety and size shown on the Drawings and shall be planted, protected, maintained and guaranteed in accordance with the requirements specified for the plants to which the replacements relate.
- C. The guarantee of all replacement plants shall also be for a period of one year from the date of their acceptance after replacement. If the replacement plant is determined to be unacceptable during the guarantee period, the Owner may elect subsequent replacement, credit or reimbursement.
- D. The Contractor shall not be responsible after planting for such injuries, losses, or damages to plants as are directly and "proximately" caused by acts of God, the public enemy, vandalism, animals, vehicles or fire.

PART 2 - PRODUCTS

2.01 PLANTS

- A. Plants shall be typical of their species and variety; have normal growth habits; well-developed branches, densely foliated; vigorous, fibrous root systems (unless selected by the Landscape Architect for other than normal forms and shapes).
- B. Plants shall be free from defects and injuries. (Plants shall be certified by the State and Federal authorities to be free from plant diseases and insect infestations).
- C. Quality and size of plants, spread of roots, and size of balls shall be in accordance with ASA Z60.1-1959, "American Standard for Nursery Stock" as published by the American Association of Nurserymen, Inc. or applicable update of same.
- D. Plants shall not be pruned before planting.
- E. Plants shall be freshly dug and nursery grown. Nursery grown plants shall have been transplanted or root pruned at least once in past three years. Plants shall have been grown under climatic conditions similar to those in locality of project, or have been acclimated for at least two years to conditions of locality or project.
- F. Collected plants must have been grown in favorable locations on subgrade which insures good fibrous roots and vigorous conditions.

- G. Each bundle of plants and all separate plants shall be properly attached thereto before delivery to project site. Label shall identify plant by name and provide any specific data as to location and arrangement.
- H. No plants shall be delivered to the project site, except for required samples, until inspection has been made in the field or at the nursery, or unless specifically authorized in writing by the Engineer.
- I. All trees must have straight trunks with a single leader intact. Bark shall be free of abrasion, all fresh cuts over 1-1/4 inch shall have calloused over.
- J. Trees will not be accepted which have had their leaders cut or which have leaders damaged so that cutting is necessary. Trees which have had their tops cut off shall bear no evidence of decayed scars and shall have any cutting showing complete healing of the stem.
- K. Unless otherwise specified, shade trees shall be free of branches up to six feet, with a single leader well branched, and reasonable straight stems.
- L. The backfill mixture for plants shall be as follows:
 - 1. One part peat or an approved rotted peat or humus.
 - 2. Two parts approved topsoil, furnished or reused. Where indicated on the Drawings a continuous planting bed eighteen (18) inches deep containing the backfill mixture shall be constructed in accordance with the Drawings.
- M. Fertilizer shall be of the complete type and shall be submitted to the Engineer only after soil has been tested.
- N. Mulch:
 - 1. Mulch shall be shredded cypress bark and shall be free from clinkers and blocky pieces. The moisture content shall be 40 percent retained with normal watering or rainfall. The material shall be free of leaves, twigs and other debris.
 - 2. A one cubic yard sample of the material to be furnished shall be spread in place on the site for approval by the Engineer. The Contractor shall not order delivery of the remaining materials until such approval is made.

PART 3 - EXECUTION

3.01 PLANTING OPERATIONS

- A. General: The Contractor shall be responsible for planting at correct grades and alignment.
- B. Stake out on the ground locations for plants and outlines of areas to be planted and obtain approval of the Engineer before excavation is begun.
- C. Excavation of Planting Areas:

1. Care - No plant pits shall be dug or prepared until their location is approved by Landscape Architect. Reasonable care shall be exercised to have pits dug and soil prepared prior to moving plants to their respective locations for planting to ensure that they will not be unnecessarily exposed to drying elements or to physical damage.
2. Circular pits with vertical sides shall be excavated for all plants except for hedge and plants specifically designated on the Drawings to be planted in beds.
3. Diameter of pits for B & B material and B.R. material shall be at least one (1) foot greater than the spread of the ball or roots. The depth of all plant pits shall be enough to accommodate the ball or roots and the prepared soil in the bottom of the pit.

3.02 PLANTING METHODS

- A. Set all plants plumb and straight. Set at such a level that, after settlement, a normal or natural relationship of the crown of the plant with the ground surface will be established. Locate plant into the center of the pit.
- B. When ball, burlapped, and platformed plants are set, first remove platform from pit. Then tamp topsoil carefully under and around base of ball to fill all voids. Remove all burlap, ropes, and wires from sides and tops of balls, but do not remove burlap from under ball.
- C. Spread out roots of bare rooted plants. Work topsoil carefully in among them. Cut off all broken or frayed roots with a clean cut.
- D. The roots of B.R. plants, pruned as required, shall be spread out to their approximate natural position. B & B plants placed in their wrapped ball shall be so set that after settlement, they will stand at approximately the same depth as in the nursery or field, the soil at the bottom of the hole to be loosened to a depth of three inches and mixed with topsoil.
- E. The plant hole shall be backfilled with topsoil placed in six inch layers around the roots or ball. Each layer shall be carefully tamped in place in a manner to avoid injury to the roots or ball or disturbing the position of the plant. When approximately two-thirds of the plant hole has been backfilled, the hole shall be filled with water and the soil allowed to settle around the roots. B & B plants shall have the burlap cut away or folded back from the top of the ball before applying the water. Form four inch saucer around the tree and shrub pits. Individual plant pits shall be finished with shoulder of soil mix placed outside rim of pits to form saucer over entire area of pits. On all sloped except minor ones, soil mix shall be formed into an adequate dam or shoulder on downhill side to catch and hold water and avoid erosion and slope on uphill side shall properly be regraded to satisfaction of Engineer.
- F. Hedge plants may be planted in a continuous trench 22 inches wide by 22 inches deep instead of separate round pits. Plants shall be evenly spaced true to line and grade after settlement.

- G. No planting except ground cover and vines shall be placed closer than two feet to pavements or structures.

3.03 PLANT SUPPORT

- A. General: Trees shall be supported immediately after planting. All trees six inches and over in trunk diameter shall be guyed. Smaller trees shall be staked. Wires shall be encased in hose to prevent direct contact with bark of the tree and shall be placed around the trunk in a single loop. Wires shall be tightened and kept taut by twisting the strands together, or with turn buckles.

- B. Guying:

- 1. Guying shall be done with three guys spaced equally about each tree. Each guy shall consist of two strands of wire attached to the tree trunk at an angle of about 60 degrees at about two-fifths of the height of the tree and anchored at the ground either to notched stakes which have been driven into the ground at an angle away from the tree so that the tops of the anchor stakes are below finished grade, or where underground utilities are within four feet of finished grade to deadmen placed at least three feet below finished grade. Lines must be taut.

- 2. Plants shall stand plumb after staking and guying.

| <u>Tree Caliper</u> | <u>Support Method</u> |
|---------------------|-----------------------|
| To 1 inch | 1 Stake w/one tie |
| 1-2 inches | 2 Stakes w/2 ties |
| 2-4 inches | 3 Guy wires |

3.04 CLEANUP AND FINISH AFTER PLANTING

- A. During course of planting, excess and waste materials shall be continuously and promptly removed, lawn areas kept clear and all reasonable precautions taken to avoid damage to existing structures, plants and grass.
- B. When planting in an area has been completed, the area shall be thoroughly cleaned up. Debris, rubbish, subsoil and waste materials shall be cleaned up and removed from the property.
- C. Existing grass areas which have been injured by the work shall be regraded and sodded or seeded; and the entire area, when completed, shall be neat and clean to the satisfaction of the Engineer.
- D. In the event that "Plant Operations" are executed after the lawns have been installed, the attention of the Contractor is called to the paragraph "Protection" following.
- E. Protection: Contractor shall protect all plants and lawns from damage at all times. The moving of heavy equipment or materials over the lawn areas shall be done on planks or pontoons.

- F. All pavements, sodded and planted areas, structures and substructures not specifically provided for in the Contract disturbed by the Contractor during the execution of the Work shall be restored by the Contractor, in a manner satisfactory to the Engineer, to their original conditions at no cost to the Owner.

3.05 MAINTENANCE

A. General:

1. Maintenance shall begin when project commences and continue only until substantial completion and written provisional acceptance.
2. Planting maintenance shall include all necessary watering, cultivation, weeding, pruning, wound dressing, disease and insect pest control, protective spraying, replacement of unacceptable materials, straightening plants which lean or sag, adjustment of plants which settle or are planted too low, and any other procedure consistent with good horticultural practice necessary to insure normal, vigorous and healthy growth of all Work under this Contract.
3. The Contractor shall be responsible for the use of all materials, labor and equipment, and any injury to plant materials, caused by such material. Labor and equipment shall be corrected and repaired by the Contractor at no expense to the Owner.
4. Watering: Water plant material other than sod. The quantity of water applied at one time shall be sufficient to penetrate the soil to a minimum depth of eight inches at a rate which will prevent saturation of the soil.
5. Weeding: Keep all planting areas free from weeds and undesirable grasses by a method and by materials approved by the Engineer.
6. Disease and Insect Pest Control: Inspect all plant materials at least once a month to locate any disease or insect pest infestations. Upon the discovery of any disease or insect pest infestation, identify or have identified, the nature or species of the infestation and submit the proposed method of control to the Engineer for approval prior to application of control measures.
7. Guys and Stakes: The Contractor shall maintain guys and stakes. This shall include but not be limited to adjusting and replacing turnbuckles as necessary and repairing or replacements of accessories when required.

END OF SECTION

SECTION 03100 CONCRETE FORMWORK

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall design and furnish all materials for concrete formwork, bracing, and supports and shall design and construct all falsework, all in accordance with the provisions of the Contract Documents.

1.02 RESPONSIBILITY

- A. The design and engineering of the formwork as well as safety considerations are the responsibility of the Contractor.

1.03 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the requirements of the Florida Building Code and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.
 - 1. Codes and Standards
 - a. The Building Code, as referenced herein, is the Florida Building Code (FBC).
 - 2. Government Standards
 - a. PS 1 U.S. Product Standard for Concrete Forms, Class I.
 - 3. Commercial Standards
 - a. ACI 347 Recommended Practice for Concrete Formwork.
 - b. ACI 318R Building Code Requirements for Reinforced Concrete.

1.04 QUALITY ASSURANCE

- A. The variation from established grade or lines shall not exceed 1/4 inch in 10 feet and there shall be no offsets or visible bulges or waviness in the finished surface. All tolerances shall be within the "Suggested Tolerances" specified in ACI 347. The Contractor shall grind smooth all fins and projections between formwork panels as directed by the Engineer.
- B. Curved forms shall be used for curved and circular structures that are cast-in-place. Straight panels will not be acceptable for forming curved structures.

PART 2 - PRODUCTS

2.01 FORM MATERIALS

- A. Except as otherwise expressly accepted by the Engineer, all lumber brought on the job site for use as forms, shoring, or bracing shall be new material. All forms shall be smooth surface forms and shall be of the following materials:

Footing sides -Construction grade Southern Pine or Douglas Fir

Walls -Steel or plywood panel

Columns -Steel, plywood or fiber glass Roof and floor

Slabs -Plywood

All other work -Steel panels, plywood or tongue and groove lumber

- B. Materials for concrete forms, formwork, and falsework shall conform to the following requirements:

1. Lumber shall be Southern Pine, construction grade or better, in conformance with U.S. Product Standard PS20.
2. Plywood for concrete formwork shall be new, waterproof, synthetic resin bonded, exterior type Douglas Fir or Southern Pine plywood manufactured especially for concrete formwork and shall conform to the requirements of PS I for Concrete Forms, Class I, and shall be edge sealed. Thickness shall be as required to support concrete at the rate it is placed, but not less than 5/8-inch thick.

2.02 PREFABRICATED FORMS

- A. Form materials shall be metal, wood, plywood, or other acceptable material that will not adversely affect the concrete and will facilitate placement of concrete to the shape, form, line, and grade indicated. Metal forms shall be an acceptable type that will accomplish such results. Wood forms for surfaces to be painted shall be Medium Density Overlaid plywood, MDO Ext. Grade.

2.03 FORMWORK ACCESSORIES

- A. Exterior corners in concrete members shall be provided with 3/4-inch chamfers. Re-entrant corners in concrete members shall not have fillets unless otherwise shown.
- B. Form ties shall be provided with a plastic cone or other suitable means for forming a conical hole to insure that the form tie may be broken off back of the face of the concrete. The maximum diameter of removable cones for rod ties, or of other removable form-tie fasteners having a circular cross-section, shall not exceed 1-1/2 inches; and all such fasteners shall be such as to leave holes of regular shape for reaming.

- C. Form ties for water-retaining structures shall have integral waterstops. Removable taper ties may be used when acceptable to the Engineer. Taper ties shall not be used to cast water retaining structural walls. At other locations, a preformed neoprene or polyurethane tapered plug sized to seat at the center of the wall shall be inserted in the hole left by the removal of the taper tie.
- D. Form release agent shall be a blend of natural and synthetic chemicals that employs a chemical reaction to provide quick, easy and clean release of concrete from forms. It shall not stain the concrete and shall leave the concrete with a paintable surface. Formulation of the form release agent shall be such that it would minimize formation of "Bug Holes" in cast- in-place concrete.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. The Contractor shall assume full responsibility for the adequate design of all forms, and any forms which are unsafe or inadequate in any respect shall promptly be removed from the Work and replaced at the Contractor's expense. A sufficient number of forms of each kind shall be provided to permit the required rate of progress to be maintained. The design and inspection of concrete forms and falsework, shall comply with applicable local, state and Federal regulations. Plumb and string lines shall be installed before concrete placement and shall be maintained during placement. Such lines shall be used by Contractor's personnel and by the Engineer and shall be in sufficient number and properly installed. During concrete placement, the Contractor shall continually monitor plumb and string line form positions and immediately correct deficiencies.
- B. Concrete forms shall conform to the shape, lines, and dimensions of members as called for on the Drawings, and shall be substantially, free from surface defects, and sufficiently tight to prevent leakage. Forms shall be properly braced or tied together to maintain their position and shape under a load of freshly-placed concrete.
- C. All forms shall be true in every respect to the required shape and size, shall conform to the established alignment and grade, and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete. Suitable and effective means shall be provided on all forms for holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridges, fins, offsets, or similar surface defects in the finished concrete. Plywood, 5/8 inch and greater in thickness, may be fastened directly to studding if the studs are spaced close enough to prevent visible deflection marks in the concrete. The forms shall be tight so as to prevent the loss of water, cement and fines during placing and vibrating of the concrete. Specifically, the bottom of wall forms that rest on concrete footings or slabs shall be provided with a gasket to prevent loss of fines and paste during placement and vibration of concrete. Such gasket may be a 1 to 1-1/2-inch diameter polyethylene rod held in position to the underside of the

wall form. Adequate clean-out holes shall be provided at the bottom of each lift of forms. The size, number, and location of such clean-outs shall be as acceptable to the Engineer.

- D. Concrete construction joints will not be permitted at locations other than those shown or specified, except as may be acceptable to the Engineer. When a second lift is placed on hardened concrete, special precautions shall be taken in the way of the number, location, and tightening of ties at the top of the old lift and bottom of the new to prevent any unsatisfactory effect whatsoever on the concrete. Pipe stubs and anchor bolts shall be set in the forms where required.

3.02 EARTH FORMS

- A. All vertical surfaces of concrete members shall be formed, except where placement of the concrete against the ground is called for on the Drawings. Not less than 1 inch of concrete shall be added to the thickness of the concrete member as shown where concrete is permitted to be placed against trimmed ground in lieu of forms. Such permission will be granted only for members of comparatively limited height and where the character of the ground is such that it can be trimmed to the required lines and will stand securely without caving or sloughing until the concrete has been placed.

3.03 FOOTINGS, SLAB EDGES AND GRADE BEAMS

- A. Provide wood side forms for all footings, slab edges and grade beams.

3.04 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

3.05 INSERTS, EMBEDDED PARTS AND OPENINGS

- A. Embedded Form Ties: Holes left by the removal of form tie cones shall be reamed with suitable toothed reamers so as to leave the surface of the holes clean and rough before being filled with mortar as specified for in Section 03350 entitled "Concrete Finishes". Wire ties for holding forms will not be permitted. No form-tying device or part thereof, other than metal, shall be left embedded in the concrete. Ties shall not be removed in such manner as to leave a hole extending through the interior of the concrete members. The use of snap-ties which cause spalling of the concrete upon form stripping or tie removal will not be permitted. If steel panel forms are used, rubber grommets shall be provided where the ties pass through the form in order to prevent loss of cement paste. Where metal rods extending through the concrete are used to support or to strengthen forms, the rods shall remain embedded and shall terminate not less than 1-inch back from the formed face or faces of the concrete.

3.06 FORM CLEANING

- A. Forms may be reused only if in good condition and only if acceptable to the Engineer. Light sanding between uses will be required wherever necessary to obtain uniform surface texture on all exposed concrete surfaces. Exposed concrete surfaces are defined as surfaces which are permanently exposed to view. Unused tie rod holes in forms shall be covered with metal caps or shall be filled by other methods acceptable to the Engineer.

3.07 FORMWORK TOLERANCES

- A. Formwork shall be constructed to insure that finished concrete surfaces will be in accordance with the tolerances listed in ACI 347.
 - 1. The following construction tolerances are hereby established and apply to finished walls and slab unless otherwise shown in the Drawings:

| Item | Tolerance |
|---|---|
| Variation of the constructed linear outline from the established position in plan | In 10 feet: 1/4 inch; In 20 feet or more: 1/2 inch |
| Variation from the level or from the grades shown on the Drawings | In 10 feet: 1/4 inch; In 20 feet or more: 1/2 inch |
| Variation from the plum | In 10 feet: 1/4 inch; In 20 feet or more: 1/2 inch |
| Variation in the thickness of slabs and walls | Minus 1/4 inch; Plus 1/2 inch |
| Variation in the locations and sizes of slab and wall openings | Plus or minus 1/4 inch |

3.08 FORM REMOVAL

- A. Remove top forms on sloping surfaces of concrete as soon as removal operations will not allow the concrete to sag. Perform any needed repairs or treatment required on sloping surfaces at once and follow immediately with the specified curing.
- B. The Contractor shall be responsible for the removal of forms and shores. Forms or shores shall not be removed before test cylinders have reached the specified minimum 28 day comprehensive strength for the class of concrete specified in Section 03300 entitled "Cast- in-Place Concrete", nor sooner than listed below:
 - 1. Grade beam side forms3 days
 - 2. Wall forms3 days
 - 3. Column forms3 days
 - 4. Beam and girder side forms3 days

- 5. Beam bottoms and slab forms/shores 14 days

3.09 MAINTENANCE OF FORMS

- A. Forms shall be maintained at all times in good condition, particularly as to size, shape, strength, rigidity, tightness, and smoothness of surface. Forms, when in place, shall conform to the established alignment and grades. Before concrete is placed, the forms shall be thoroughly cleaned. The form surfaces shall be treated with a nonstaining mineral oil or other lubricant acceptable to the Engineer. Any excess lubricant shall be satisfactorily removed before placing the concrete. Where field oiling of forms is required, the Contractor shall perform the oiling at least two weeks in advance of their use. Care shall be exercised to keep oil off the surfaces of steel reinforcement and other metal items to be embedded in concrete.

END OF SECTION

**SECTION 03200
CONCRETE REINFORCEMENT**

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall furnish, fabricate and place all concrete reinforcing steel, welded wire fabric, couplers, and concrete inserts for use in reinforced concrete and shall perform all appurtenant work, including all the wires, clips, supports, chairs, spacers, and other accessories, all in accordance with the Contract Documents.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these specifications, all Work specified herein shall conform to or exceed the requirements of the Florida Building Code and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.

1. Codes and Standards

- a. The Building Code, as referenced herein, is the Florida Building Code (FBC).

2. Commercial Standards

| | |
|------------|--|
| ACI 315R | Details and Detailing of Concrete Reinforcement. |
| CRSI | Concrete Reinforcing Steel Institute Manual of Standard Practice |
| ACI 305R | Hot Weather Concreting |
| ACI 318R | Building Code Requirements for Reinforced Concrete. |
| ACI 350R- | Code Requirements for Environmental Engineering Concrete Structures |
| WRI | Manual of Standard Practice for Welded Wire Fabric. |
| AWS DI.4 | Structural Welding Code - Reinforcing Steel. |
| ASTM A 185 | Specification for Welded Steel Wire Fabric for Concrete Reinforcement. |
| ASTM A 615 | Specification for Deformed and Plain Billet-Steel Bars for Concrete reinforcement. |

1.03 SUBMITTALS

- A. The Contractor shall furnish shop bending diagrams, placing lists, and Drawings of all reinforcing steel prior to fabrication in accordance with the requirements of the Section 01300 entitled, "Submittals."
- B. Details of the concrete reinforcing steel and concrete inserts shall be submitted by the Contractor at the earliest possible date after receipt by the Contractor of the Notice to Proceed. Said details of reinforcing steel for fabrication and erection shall conform to ACI 315 and the requirements specified and shown. The shop bending diagrams shall show the actual lengths of bars, to the nearest inch measured to the intersection of the extensions (tangents for bars of circular cross section) of the outside surface. The shop Drawings shall include bar placement diagrams which clearly indicate the dimensions of each bar splice.
- C. Where mechanical couplers are shown on the Drawings to be used to splice reinforcing steel, the Contractor shall submit manufacturer's literature which contains instructions and recommendations for installation for each type of coupler used; certified test reports which verify the load capacity of each type and size of coupler used; and shop Drawings which show the location of each coupler with details of how they are to be installed in the formwork.
- D. If reinforcing steel is spliced by welding at any location, the Contractor shall submit mill test reports which shall contain the information necessary for the determination of the carbon equivalent as specified in AWS D1.4. The Contractor shall submit a written welding procedure for each type of weld for each size of bar which is to be spliced by welding, merely a statement that AWS procedures will be followed is not acceptable. Welding of rebar shall be done only where shown on the Drawings or allowed in writing by the Engineer.

PART 2 - PRODUCTS

2.01 REINFORCEMENT

- A. All reinforcing steel for all reinforced concrete construction shall conform to the following requirements:
 - 1. Bar reinforcement shall conform to the requirements of ASTM A 615 for Grade 60 Billet Steel Reinforcement with supplementary requirement S-1, and shall be manufactured in the United States.
 - 2. Welded wire fabric reinforcement shall conform to the requirements of ASTM A 185 and the details shown on the Drawings; provided, that welded wire fabric shall be furnished in flat sheets only. All welded wire fabric reinforcement shall be galvanized.

2.02 ACCESSORY MATERIALS

- A. Bolsters, chairs, spacers and other devices for supporting and fastening reinforcing in place shall be galvanized wire type complying with CRSI recommendations on grade with gray plastic tipped legs.
- B. Tie Wire: Galvanized 16 gauge annealed type.
- C. Concrete blocks (dobies), used to support and position reinforcing steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Concrete blocks shall only be used bottom mat of reinforcing steel for slabs on grade.
- D. Couplers used to mechanically splice reinforcing steel shall be Linton Standard Coupler - A2 manufactured by ERICO Products, inc. or equal. Bars shall be shop threaded to receive couplers.

2.03 FABRICATION

- A. Reinforcing steel shall be accurately formed to the dimensions and shapes shown on the Drawings, and the fabricating details shall be prepared in accordance with ACI 315, ACI 318, and ACI 350 except as modified by the Drawings. Stirrups and tie bars shall be bent around a pin having a diameter not less than 1-1/2 inch for No.3 bars, 2-inch for No.4 bars, and 2-1/2 inch for No.5 bars. Bends for other bars shall be made around a pin having a diameter not less than 6 times the minimum thickness, except for bars larger than 1 inch, in which case the bends shall be made around a pin of 8 bar diameters. Bars shall be bent cold.
- B. The Contractor shall fabricate reinforcing bars for structures in accordance with bending diagrams, placing lists, and placing Drawings. Said Drawings, diagrams, and lists shall be prepared by the Contractor as specified under Section entitled "Submittals," herein.
- C. Fabricating Tolerances: Bars used for concrete reinforcing shall meet the following requirements for fabricating tolerances:
 - 1. Sheared length: + 1 inch
 - 2. Depth of bars: + 0, - 1/2 inch
 - 3. Stirrups and ties: + 1/2 inch
 - 4. All other bends: + 1 inch

PART 3 - EXECUTION

3.01 PLACEMENT

- A. Reinforcing steel shall be accurately positioned as shown on the Drawings, and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcing steel shall be supported by concrete, plastic or metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcing steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used, in sufficient numbers to support the bars without settlement, but in no case shall such support be continuous. All concrete blocks used to support reinforcing steel shall be tied to the steel with wire ties which are embedded in the blocks. For concrete over formwork, the Contractor shall furnish concrete, metal, plastic, or other acceptable bar chairs and spacers.
- B. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.
- C. Bars additional to those shown on the Drawings which may be found necessary or desirable by the Contractor for the purpose of securing reinforcement in position shall be provided by the Contractor at its own expense.
- D. Unless otherwise specified, reinforcement placing tolerances shall be within the limits specified in Section 7.5 of ACI 318 except where in conflict with the requirements of the Building Code.
- E. Bars may be moved as necessary to avoid interference with other reinforcing steel, conduits, or embedded items. If bars are moved more than one bar diameter, or enough to exceed the above tolerances, the resulting arrangement of bars shall be as acceptable to the Engineer.
- F. Welded wire fabric reinforcement placed over horizontal forms shall be supported on slab bolsters having gray, plastic-coated standard type legs as specified in Paragraph B herein. Slab bolsters shall be spaced not less than 30 inches on centers, shall extend continuously across the entire width of the reinforcing mat, and shall support the reinforcing mat in the plane shown on the Drawings.
- G. Welded wire fabric placed over the ground shall be supported on wired concrete blocks (dobies) spaced not more than 3 feet on centers in any direction. The construction practice of placing welded wire fabric on the ground and hooking into place in the freshly placed concrete shall not be used.
- H. The clear distance between parallel bars (except in columns and between multiple layers of bars in beams) shall be not less than the nominal diameter of the bars nor less than 1-1/3 times the maximum size of the coarse aggregate, nor less than one inch.
- I. Where reinforcement in beams or girders is placed in 2 or more layers, the clear distance between layers shall be not less than one inch.

- J. In columns, the clear distance between longitudinal bars shall be not less than 1-1/2 times the bar diameter, nor less than 1-1/2 times the maximum size of the coarse aggregate, nor less than 1-1/2 inches.
- K. The clear distance between bars shall also apply to the distance between a contact splice and adjacent splices or bars.
- L. Reinforcing bar splices shall only be used at locations shown on the Drawings. When it is necessary to splice reinforcement at points other than where shown, the character of the splice shall be as acceptable to the Engineer.
- M. The length of lap for reinforcing bars, unless otherwise shown on the Drawings shall be in accordance with ACI318, Section 12.15.1 for a class B splice.
- N. Laps of welded wire fabric shall be in accordance with the ACI 318. Adjoining sheets shall be securely tied together with No. 14 tie wire, one tie for each 2 running feet. Wires shall be staggered and tied in such a manner that they cannot slip.
- O. Reinforcing shall not be straightened or rebent in a manner which will injure the material. Bars with kinks or bends not shown on the Drawings shall not be used. All bars shall be bent cold, unless otherwise permitted by the Engineer. No bars partially embedded in concrete shall be field-bent except as shown on the Drawings or specifically permitted by the Engineer.

3.02 CLEANING AND PROTECTION

- A. Reinforcing steel shall at all times be protected from conditions conducive to corrosion until concrete is placed around it.
- B. The surfaces of all reinforcing steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar and other foreign substances immediately before the concrete is placed. Where there is delay in depositing concrete, reinforcing shall be reinspected and, if necessary recleaned.

END OF SECTION

**SECTION 03300
CAST-IN-PLACE CONCRETE**

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall furnish all materials for concrete in accordance with the provisions of this Section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete, all in accordance with the requirements of the Contract Documents.
- B. The requirements in this section shall apply to the following types of concrete:
1. Class A Concrete: Normal weight concrete used at all locations, unless otherwise noted.
 2. Class B Concrete: Normal weight concrete with pea-rock aggregate. Class B concrete shall be used only at locations indicated on the Drawings or as approved by the Engineer..
 3. Class C Concrete: Normal weight concrete used in electrical/ instrumentation ductbanks, pipe encasements and sidewalks.
 4. Tremie concrete: Concrete indicated to be placed underwater.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the requirements of the Florida Building Code (FBC) and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section.
- B. Codes and Standards
1. The Building Code, as referenced herein, shall be the Florida Building Code.
- C. Federal Specifications
1. UU-B-790A (Int. Amd. 1) Building Paper, Vegetable Fiber (Kraft, Waterproofed, Water Repellant and Fire Resistant).
- D. Commercial Standards
- | | |
|----------------|---|
| ACI 214.1 R-81 | Recommended Practice for Evaluation of Strength Test Results of Concrete. |
| AC1318R | Building Code Requirements for Reinforced Concrete. |

| | |
|------------|---|
| ACI 301 | Specifications for Structural Concrete for Buildings. |
| ACI 315R | Details and Detailing of Concrete Reinforcement. |
| ACI 347R | Recommended Practice for Concrete Formwork. |
| ASTM C 31 | Methods of Making and Curing Concrete Test Specimens in the Field. |
| ASTM C 33 | Specification for Concrete Aggregates. |
| ASTM C 39 | Test Method for Compressive Strength of Cylindrical Concrete Specimens. |
| ASTM C 94 | Specification for Ready-Mixed Concrete. |
| ASTM C 114 | Method for Chemical Analysis of Hydraulic Cement. |
| ASTM C 136 | Method for Sieve Analysis of Fine and Coarse Aggregate. |
| ASTM C 143 | Test Method for Slump of Portland Cement Concrete. |
| ASTM C 150 | Specification for Portland Cement. |
| ASTM C 156 | Test Method for Water Retention by Concrete Curing Materials. |
| ASTM C 157 | Test Method for Length Change of Hardened Cement Mortar and Concrete. |
| ASTM C 192 | Method of Making and Curing Concrete Test Specimens in the Laboratory. |
| ASTM C 260 | Specification for Air-Entraining Admixtures for Concrete. |
| ASTM C 494 | Specification for Chemical Admixtures for Concrete. |

1.03 SUBMITTALS

- A. The design mix to be used shall be prepared by qualified persons and submitted for review. The design of the mix is the responsibility of the Contractor subject to the limitations of the specifications. Review processing of this submission will be required only as evidence that the mix has been designed by qualified persons and that the minimum requirements of the specifications have been met. Such review will in no way alter the responsibility of the Contractor to furnish concrete meeting the requirements of the specifications relative to strength and slump. If in the progress of the work the sources of materials change in characteristics or the Contractor requests a new source in writing, the Contractor shall, at his expense submit new test data and information for the establishment of a new design mix. Submit mix designs for all classes of concrete.

- B. Where ready-mix concrete is used, the Contractor shall provide delivery tickets at the time of delivery of each load of concrete. In addition to the information required by ASTM C94, each ticket shall show the mix number, cement content and water/cement ratio.
- C. Location of all proposed construction joints.
- D. Manufacturer's data on all admixtures.
- E. Concrete mix designs for each type of mix proposed and its intended locations.
- F. A schedule of all concrete placement with volume of concrete planned to be placed each day.
- G. A layout of all structures with all planned construction joint locations.

1.04 QUALITY ASSURANCE

- A. Plant equipment and facilities shall meet all requirements of the Check List for Certification of Ready Mixed Concrete Production facilities of the National Ready Mixed Concrete Association and ASTM C 94.
- B. Tests for compressive strength and slump of concrete will be performed as specified herein. Test for determining slump will be in accordance with the requirements of ASTM C 143.
- C. The cost of all tests, will be borne by the Owner. However, the Contractor shall be charged for the cost of any additional tests and investigation on work performed which does not meet the Specifications.
- D. Concrete for testing shall be supplied by the Contractor at no cost to the Owner, and the Contractor shall provide assistance to the Engineer in obtaining samples. The Contractor shall dispose of and clean up all excess material.
- E. Construction Tolerances
 - 1. The Contractor shall set and maintain concrete forms and perform finishing operations so as to ensure that the completed work is within the tolerances specified herein. Surface defects and irregularities are defined as finishes are to be distinguished from tolerances. Tolerance is the specified permissible variation from lines, grades, or dimensions shown. Where tolerances are not stated in the Specifications, permissible deviations will be in accordance with ACI 347 and Section 03100 entitled "Concrete Formwork".

1.05 FIELD SAMPLES

- A. Field Compression Tests
 - 1. Compression test specimens shall be taken during construction from the first placement of each class of concrete specified herein and at intervals

thereafter as selected by the Engineer to insure continued compliance with these Specifications. At least one set of test specimens shall be made for each 50 yards of concrete placed. Each set of test specimens shall be a minimum of 5 cylinders.

2. Compression test specimens for concrete shall be made in accordance with ASTM C 31. Specimens shall be 6-inch diameter by 12-inch high cylinders.
3. Compression test shall be performed in accordance with ASTM C 39. One cylinder tested at three days, one test cylinders will be tested at 7 days and 2 at 28 days. The remaining cylinder will be held to verify test results, if needed.

B. Evaluation and Acceptance of Concrete

1. Evaluation and acceptance of the compressive strength of concrete shall be according to the requirements of ACI 318, Chapter 5 "Concrete Quality Mixing and Placing", and as specified herein.
2. If any concrete fails to meet these requirements, immediate corrective action shall be taken to increase the compressive strength for all subsequent batches of the type of concrete affected.
3. All concrete which fails to meet the ACI requirements and these specifications, is subject to removal and replacement at the cost of the Contractor.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

- A. Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Only one brand of cement shall be used. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.
- B. All materials furnished and stored for the work shall comply with the requirements of ACI 301, as applicable.
- C. Materials for concrete shall conform to the following requirements:
 1. Cement shall be standard brand portland cement conforming to ASTM C 150 for Type II. Portland cement shall contain not more than 0.60 percent alkalis. The term "alkalis" referred to herein is defined as the sum of the percentage of sodium oxide and 0.658 times the percentage of potassium oxide ($\text{Na}_2\text{O} + 0.658 \text{K}_2\text{O}$). These oxides shall be determined in accordance with ASTM C 114. A single brand of cement shall be used throughout the Work, and prior to its use, the brand shall be acceptable to the Engineer. The cement shall be suitably protected from exposure to moisture until used. Cement that has become lumpy shall not be used. Sacked cement shall be stored in such a manner so as to permit access for inspection and sampling. Certified mill test

reports for each shipment of cement to be used shall be submitted to the Engineer if requested regarding compliance with these Specifications.

2. Water shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts and other impurities. The water shall be considered potable, for the purposes of this Section only, if it meets the requirements of the local governmental agencies.
3. Aggregates shall be obtained from pits acceptable to the Engineer, shall be non-reactive, and shall conform to the Florida Building Code (FBC) and ASTM C 33. Maximum size of coarse aggregate shall be as specified in Article 2.04, Paragraph B of this Section. Lightweight sand for fine aggregate will not be permitted.
 - a. Coarse aggregates shall consist of clean, hard, durable gravel, crushed gravel, crushed rock or a combination thereof. The coarse aggregates shall be prepared and handled in two or more size groups for combined aggregates with a maximum size not greater than 1 inch. When the aggregates are proportioned for each batch of concrete the two size groups shall be combined.
 - b. Fine aggregates shall be manufactured sand that is hard and durable.
 - c. Combined aggregates shall be well graded from coarse to fine sizes, and shall be uniformly graded between screen sizes to produce a concrete that has optimum workability and consolidation characteristics. Where a trial batch is required for a mix design, the final combined aggregate gradations will be established during the trial batch process.
 - d. When tested in accordance with "Potential Reactivity of Aggregates (Chemical Method)" (ASTM C 289), the ratio of silica released to reduction in alkalinity shall not exceed 1.0.
 - e. When tested in accordance with "Organic Impurities in Sands for Concrete" (ASTM C 40), the fine aggregate shall produce a color in the supernatant liquid no darker than the reference standard color solution.
 - f. When tested in accordance with "Resistance to Abrasion of Small size Coarse Aggregate by Use of the Los Angeles Machine" (ASTM C 131), the coarse aggregate shall show a loss not exceeding 42 percent after 500 revolutions, or 10.5 percent after 100 revolutions.
 - g. When tested in accordance with "Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate" (ASTM C 88), the loss resulting after five cycles shall not exceed 10 percent for fine or coarse aggregate when using sodium sulfate.
4. All cement, admixtures, sealers, and form release agents used in or on the concrete or mortar shall conform to NSF International (NSF) standard 61-2001 and Addendum 1.0-2001 to NSF Standard 61-2001.

5. Aggregate used in the concrete or mortar shall be clean (i.e. free of excess clay, silt, mica, organic matter, chemical salts and coated grains) and shall be essentially free of those metals and radionuclides regulated under applicable primary drinking water standards.

2.02 ADMIXTURES

- A. Air-entraining agent meeting the requirements of ASTM C 260, shall be used. Sufficient air-entraining agent shall be used to provide a total air content of 3 to 5 percent.
- B. Admixtures shall be required at the Engineer's discretion or, if not required, may be added at the Contractor's option to control the set, effect water reduction, and increase workability. In either case, the addition of an admixture shall be at the Contractor's expense. The use of an admixture shall be subject to acceptance by the Engineer. Concrete containing an admixture shall be first placed at a location determined by the Engineer. If the use of an admixture is producing an inferior end result, the Contractor shall discontinue use of the admixture. Admixtures specified herein shall conform to the requirements of ASTM C 494. The required quantity of cement shall be used in the mix regardless of whether or not an admixture is used. Admixtures shall contain no free chloride ions, be non-toxic after 30 days, and shall be compatible with and made by the same manufacturer as the air entraining admixture.
 1. Set controlling admixture shall be either with or without water-reducing properties. Where the air temperature at the time of placement is expected to be consistently over 80 degrees Fahrenheit, a set retarding admixture such as Sika Chemical Corporation's Plastiment, Master Builder's Pozzoloth 200R or equal shall be used. Where the air temperature at the time of placement is expected to be consistently under 40 degrees Fahrenheit, a set accelerating admixture such as Sika Chemical Corporation's Plastocrete 161 FL, Master Builder's Pozzoloth 50C, or equal shall be used.
 2. Low range water reducer shall be added to all structural concrete, and shall conform to ASTM C 494, Type A. It shall be either a hydroxylated carboxylic acid type or a dydroxylated polymer type. The quantity of admixture used and the method of mixing shall be in accordance with the manufacturer's instructions and recommendations.
 3. Water reducing and retarding admixture shall be in conformance with ASTM C 494 Type D free of chlorides, "MB-HC" by Master Builders, "WRDA-79" by Grace or equal.
 4. High range water reducer shall be sulfonated polymer conforming to ASTM C 494, Type For G.
 5. If the high range water reducing agent is added to the concrete at the batch plant, it shall be second generation type, Daracem 100, as manufactured by W.R. Grace & Co., Pozzolith 430R, as manufactured by Master Builders; or equal. High range water reducer shall be added to the concrete after all other ingredients have been mixed and initial slump has been verified.

6. If the high range water reducer is added to the concrete at the job site, it shall be used in conjunction with a low range water reducer and shall be Pozzoloth 400N and Pozzoloth MBL82, as manufactured by Master Builders; WRDA 19 and WRDA 79, as manufactured by W.R. Grace & Co., or equal. Concrete shall have a slump of 3 inches.± 1/2 inch prior to adding the high range water reducing admixture at the job site. The high range water reducing admixture shall be accurately measured and pressure injected into the mixer as a single dose by an experienced technician. A standby system shall be provided and tested prior to each day's operation of the job site system.
7. Concrete shall be mixed at mixing speed for a minimum of 30 mixer revolutions after the addition of the high range water reducer.
8. The Contractor shall submit certification from each admixture manufacturer that all admixtures utilized in the design mix are compatible with one another and properly proportioned.
9. Prohibited Admixtures: Calcium chloride, thiocyanate or admixtures containing more than 0.05 percent chloride ions are not permitted.
10. Certification: Written conformance to the above mentioned requirements and the chloride ion content of the admixture will be required from the admixture manufacturer prior to Mix design review by the Engineer.
11. For Class A, Class B and Class C Concrete, no flyash may be added.

2.03 ACCESSORIES

- A. Epoxy adhesives shall be the following products for the applications specified to be used in strict accordance with manufacturer's recommendations.
 1. For bonding freshly-mixed, plastic concrete to hardened concrete, Sikadur 32 Hi-Mod, LPL Epoxy Adhesive, as manufactured by Sika Chemical Corporation; Concesive 1001-LPL, as manufactured by Adhesive Engineering Company; or equal.
 2. For bonding hardened concrete or masonry to steel, Colma-Our Gel, Sikadur Hi-Mod Gel, or equal.
 3. Epoxy grouting of vertical and horizontal dowels in existing concrete: A two-component structural epoxy gel such as Rawl/Sika Foil-Fast Epoxy Injection Gel, Sikadur injection gel as manufactured by Sika Chemical Corp., EPCON G5, C6 or approved equal. Place with pneumatic or manual injection gun.

2.04 CONCRETE MIX

- A. Concrete shall be composed of cement, admixtures, aggregates and water. These materials shall be of the qualities specified. The exact proportions in which these materials are to be used for different parts of the work will be determined by the Contractor. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and,

where deposited in forms, to have good consolidation properties and maximum smoothness of surface. Mix designs with more than 41 percent of sand of the total weight of fine and coarse aggregate shall not be used for Class A Concrete. The aggregate gradations shall be formulated to provide fresh concrete that will not promote rock pockets around reinforcing steel or embedded items. The proportions shall be changed whenever necessary or desirable to meet the required results at no additional cost to the Owner. All changes shall be subject to review by the Engineer.

B. The proportions of cement, aggregates, admixtures and water used in the concrete shall be based on tests of grading and moisture content of materials, slump of concrete mixture, strength of concrete and the following factors:

1. Class A Concrete (All cast-in-place and precast concrete unless otherwise noted).

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|--|--|
| Minimum cementitious materials content, per cubic yard | without flyash added: 611 lbs. |
| Maximum water-cementitious materials ratio, by weight | 0.40 |
| Slump range | 3 inches to 4 inches with water reducing admixture 3-inch maximum before addition of high range water reducing admixture. 8-inch maximum after addition of high range water reducing admixture |
| Coarse Aggregate | #57 per ASTM C33 |
| Compressive strength at 28 days - F'c | 5,500 psi |
| Air Content | 3% ± 1 % |

2. Class B Concrete (At locations shown on the Drawings or specified herein).

| | |
|--|-----------|
| Minimum cementitious materials content, per cubic yard | 517 lbs. |
| Maximum water-cementitious materials ratio, by weight | 0.50 |
| Slump, maximum | 5 inches |
| Compressive strength at 28 days - F'c | 3,000 psi |
| Coarse Aggregate | Pearock |
| Air Content | 3% ± 1% |

3. Class C Concrete (Sidewalks)

| | |
|---|----------|
| Minimum cementitious materials content, per | 500 lbs. |
|---|----------|

| | |
|---|------------------|
| cubic yard | |
| Maximum water-cementitious materials ratio, by weight | 0.55 |
| Slump, maximum | 5 inches |
| Compressive strength at 28 days - F'c | 3,000 psi |
| Compressive strength at 28 days – F'c (Sidewalk only) | 2,500 psi |
| Coarse Aggregate | #57 per ASTM C33 |
| Air Content | 2 ½ % ± 5 ½ % |

- C. All Class A concrete, unless noted otherwise on the Drawings, shall be air entrained concrete and contain the high range water-reducing admixture (superplasticizer). A water reducing admixture may be added to the mix at the Contractor's option.
- D. The mix proportions used shall be changed subject to the limitation specified herein, whenever such change is necessary or desirable to secure the required strength, density, workability, and surface finish and the Contractor shall be entitled to no additional compensation because of such changes.

2.05 CONSISTENCY

- A. The quantity of water entering into a batch of concrete shall be just sufficient, with a normal mixing period, to produce a concrete which can be worked properly into place without segregation, and which can be compacted by the vibratory methods herein specified to give the desired density, impermeability and smoothness of surface. The quantity of water shall be changed as necessary, with variations in the nature or moisture content of the aggregates, to maintain uniform production of a desired consistency. The consistency of the concrete in successive batches shall be determined by slump tests in accordance with ASTM C 143. Slumps shall be 4 inches ± 1 inch measured at the form. Slump with high range water reducers shall be 6 inches ± 1 inch at the form.

2.06 READY-MIXED CONCRETE

- A. Ready-mixed concrete shall be used meeting the requirements as to materials, batching, mixing, transporting, and placing as specified herein and in accordance with ASTM C 94.
- B. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within one and one-half hour after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. Upon delivery from the truck concrete temperature shall not exceed 90 degrees Fahrenheit.

- C. Truck mixers shall be equipped with electrically-actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type. The counters shall be actuated at the time of starting mixers at mixing speeds.
- D. Each batch of concrete shall be mixed in a truck mixer for not less than 70 revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment. Additional mixing, if any, shall be at the speed designated by the manufacturer of the equipment as agitating speed. All materials including mixing water shall be in the mixer drum before actuating the revolution counter for determining the number of revolution of mixing.

PART 3 - EXECUTION

3.01 PROPORTIONING AND MIXING

- A. Proportioning of the concrete mix shall conform to the requirements of Chapter 3 "Proportioning" of ACI 301; provided, that the maximum slump for any concrete shall not exceed the limits specified in this Section of the Specifications.
- B. Mixing of concrete shall conform to the requirements of Chapter 7 of ACI 301 Specifications.
- C. Retempering of concrete or mortar which has partially hardened will not be permitted.

3.02 PREPARATION

- A. Earth surfaces shall be thoroughly wetted by sprinkling, prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing concrete thereon. A vapor barrier specified in Section 07190 entitled "Vapor Barrier" shall be placed. The surface shall be free from standing water, mud, and debris at the time of placing concrete.
- B. No concrete shall be placed until the reinforcement steel and formwork have been erected in a manner acceptable to the Engineer. The Contractor shall notify the Engineer not less than two working days prior to Concrete Placement, allowing one day for review and any corrective measures which are required.
- C. Joints in Concrete
 - 1. Concrete surfaces upon or against which concrete is to be placed shall be given a roughened surface for good bond and a bonding agent shall be placed.
 - 2. After the surfaces have been prepared all approximately horizontal construction joints shall be covered with a layer of mortar approximately one-inch thick. The mortar shall have the same proportions of cement and sand as the regular concrete mixture. The water-cement ratio of the mortar in place

shall not exceed that of the concrete to be placed upon it, and the consistency of the mortar shall be suitable for placing and working in the manner hereinafter specified. The mortar shall be spread uniformly and shall be worked thoroughly into all irregularities of the surface. Wire brooms shall be used where possible to scrub the mortar into the surface. Concrete shall be placed immediately upon the fresh mortar.

D. Placing Interruptions

1. When placing of concrete is to be interrupted long enough for the concrete to take a set, the working face shall be given a shape by the use of forms or other means, that will secure proper union with subsequent work; provided that construction joints shall be made only where acceptable to the Engineer. Cold joints will be sufficient cause for rejection of the work.

E. Embedded Items

1. No concrete shall be placed until all formwork, installation of parts to be embedded, reinforcing steel, and preparation of surfaces involved in the placing have been completed and accepted by the Engineer at least four hours before placement of concrete. All surfaces of forms and embedded items that have become encrusted with dried grout from concrete previously placed shall be cleaned of all such grout before the surrounding or adjacent concrete is placed.
2. All inserts or other embedded items shall conform to the requirements herein.

F. All reinforcement, anchor bolts, sleeves, inserts, and similar items shall be set and secured in the forms where shown on the Drawings or by shop drawings and shall be acceptable to the Engineer before any concrete is placed. Accuracy of placement is the responsibility of the Contractor.

G. All anchor bolts called for on the drawings shall be cast-in-place in the concrete. Drilled, impact, adhesive or other types of anchors shall not be substituted for anchor bolts unless otherwise shown on the Drawings. Anchor bolts shall conform to the requirements set forth in Section 05500 entitled "Miscellaneous Fabrications."

H. Casting New Concrete Against Old

1. Where concrete is to be cast against old concrete (any concrete which is greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by sand-blasting (exposing aggregate) to an amplitude of $\frac{1}{4}$ " prior to the application of an epoxy bonding agent.

I. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited underwater, except where shown on the Drawings to be placed by the tremie method, nor shall the Contractor allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such manner and at such velocity as will injure the surface

finish of the concrete. Pumping or other necessary dewatering operations for removing ground water, if required, will be subject to the review of the Engineer.

J. Corrosion Protection

1. Pipe, conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there will be a minimum of 2 inches clearance between said items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement will not be permitted.
2. Openings for pipes, inserts for pipe hangers and brackets, and the setting of anchors shall, where practicable, be provided for during the placing of concrete.
3. Anchor bolts shall be accurately set, and shall be maintained in position by templates while being embedded in concrete.
4. The surfaces of all metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar, and other foreign substances immediately before the concrete is placed.

3.03 PLACING CONCRETE

- A. Placing of concrete shall conform to the applicable requirements of Chapter 8 of ACI 301 and the requirements of this Section.
- B. Non-Conforming Work or Materials
1. Concrete which upon or before placing is found not to conform to the requirements specified herein shall be rejected and immediately removed from the Work. Concrete which is not placed in accordance with these Specifications, or which is of inferior quality, shall be removed and replaced by and at the expense of the Contractor.
- C. Unauthorized Placement
1. No concrete shall be placed except in the presence of duly authorized representative of the Engineer. The Contractor shall notify the Engineer at least 24 hours in advance of placement of any concrete.
- D. Placement in Wall Forms
1. Concrete shall not be dropped through reinforcement steel or into any deep form, whether reinforcement is present or not, causing separation of the coarse aggregate from the mortar on account of repeatedly hitting rods or the sides of the form as it falls, nor shall concrete be placed in any form in such a manner as to leave accumulation of mortar on the form surfaces above the placed concrete. In such cases, some means such as the use of hoppers and, if necessary, vertical ducts of canvas, rubber, or metal shall be used for placing concrete in the forms in a manner that it may reach the place of final

deposit without separation. In no case shall the free fall of concrete exceed 4 feet below the ends of ducts, chutes, or buggies.

2. Concrete shall be uniformly distributed during the process of depositing and in no case after depositing shall any portion be displaced in the forms more than 6 feet in horizontal direction. Concrete in forms shall be deposited in uniform horizontal layers not deeper than 2 feet; and care shall be taken to avoid inclined layers or inclined construction joints except where such are required for sloping members. Each layer shall be placed while the previous layer is still soft. The rate of placing concrete in forms shall not exceed 5 feet of vertical rise per hour.

E. Casting New Concrete Against Old

1. An epoxy adhesive bonding agent shall be applied to set surfaces of construction joints according to the manufacturer's written recommendations.

F. Conveyor Belts and Chutes

1. All ends of chutes, hopper gates, and all other points of concrete discharge throughout the Contractor's conveying, hoisting and placing system shall be so designed and arranged that concrete passing from them will not fall separated into whatever receptacle immediately receives it. Conveyor belts, if used, shall be of a type acceptable to the Engineer. Chutes longer than 50 feet will not be permitted. Minimum slopes of chutes shall be such that concrete of the specified consistency will readily flow in them. If a conveyor belt is used, it shall be wiped clean by a device operated in such a manner that none of the mortar adhering to the belt will be wasted. All conveyor belts and chutes shall be covered. Sufficient illumination shall be provided in the interior of all forms so that the concrete at the places of deposit is visible from the deck or runway.

G. Placement in Slabs

1. Concrete placed in sloping slabs shall proceed uniformly from the bottom of the slab to the top, for the full width of the pour. As the work progresses, the concrete shall be vibrated and carefully worked around the slab reinforcement, and the surface of the slab shall be screeded in an up-slope direction.

H. Temperature of Concrete

1. The temperature of concrete when it is being placed shall be not more than 90 degrees F. Concrete ingredients shall not be heated to a temperature higher than that necessary to keep the temperature of the mixed concrete, as placed, from falling below the specified minimum temperature. If concrete is placed when the weather is such that the temperature of the concrete would exceed 90 degrees Fahrenheit, the Contractor shall employ effective means, such as precooling of aggregates and mixing water using ice or placing at night, as necessary to maintain the temperature of the concrete, as it is placed, below 90 degrees F. The Contractor shall be entitled to no additional compensation on account of the foregoing requirements. During summer

months concrete pours shall be scheduled in the morning or early part of the day when temperatures are cooler.

I. Pumping Equipment

1. Pumping equipment and procedures if used shall conform to the recommendations contained in the report of ACI Committee 304 on Placing Concrete by Pumping Methods, ACI 304.2R. The specified slump shall be measured at the point of discharge. The loss of slump in pumping shall not exceed 1-1/2 inches.

J. The order of placing concrete in all parts of the work shall be acceptable to the Engineer. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints shown on the Drawings. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall have cured at least 7 days before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the 2 adjacent wall panels have cured at least 14 days.

K. The surface of the concrete shall be level whenever a run of concrete is stopped. To insure a level, straight joint on the exposed surface of walls, a wood strip at least 3/4-inch thick shall be tacked to the forms on these surfaces. The concrete shall be carried about 1/2-inch above the underside of the strip. About one hour after the concrete is placed, the strip shall be removed and any irregularities in the edge formed by the strip shall be leveled with a trowel and all laitance shall be removed.

L. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted, throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete during placement. Vibrators shall be high speed power vibrators (8000 to 10,000 rpm) of an immersion type in sufficient number and with (at least one) standby units as required.

M. Care shall be used in placing concrete around waterstops. The concrete shall be carefully worked by rodding and vibrating to make sure that all air and rock pockets have been eliminated. Where flat-strip type waterstops are placed horizontally, the concrete shall be worked under the waterstops by hand, making sure that all air and rock pockets have been eliminated. Concrete surrounding the waterstops shall be given additional vibration, over and above that used for adjacent concrete placement to assure complete embedment of the waterstops in the concrete.

N. Concrete in walls shall be internally vibrated and at the same time, stirred, or worked with suitable appliances, tamping bars, shovels, or forked tools until it completely fills the forms or excavations and closes snugly against all surfaces. Subsequent layers of concrete shall not be placed until the layers previously placed have been worked thoroughly as specified. Vibrators shall be provided in sufficient numbers, with standby units as required, to accomplish the results herein specified within 15 minutes after concrete of the prescribed consistency is placed in the forms. The vibrating head shall be kept from contact with the surfaces of the forms. Care shall

be taken not to vibrate concrete excessively or to work it in any manner that causes segregation of its constituents.

3.04 CONCRETE FINISHING

- A. Concrete finishes are specified in Section 03350 entitled "Concrete Finishes".

3.05 CURING AND PROTECTION

- A. Curing is specified in Section 03370 entitled "Concrete Curing".

3.06 PLACING CONCRETE UNDER PRESSURE (PUMPING)

- A. Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall have the capacity for the operation. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. To obtain the least line resistance, the layout of the pipeline system shall contain a minimum number of bends with no change in pipe size. If two sizes of pipe must be used, the smaller diameter should be used at the pump end and the larger at the discharge end. When pumping is completed, the concrete remaining in the pipelines, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients.
- B. No aluminum parts shall be in contact with the concrete during the entire placing of concrete under pressure at any time.
- C. Prior to placing concrete under pressure, the Contractor shall submit the concrete mix design together with test results from a recognized testing laboratory proving the proposed mix meets all requirements. In addition, at the Contractor's option, an actual pumping test under field conditions may be performed prior to use of the accepted mix. This test requires a duplication of anticipated site conditions from beginning to end. The batching and truck mixing shall be the same as will be used; the same pump and operator shall be present and the pipe and pipe layouts will reflect the maximum height and distance contemplated.
- D. If the pumped concrete does not produce satisfactory end results, the Contractor shall discontinue the Pumping operation and proceed with the placing of concrete using conventional methods.
- E. The pumping equipment must have two cylinders and be designed to operate with one cylinder only in case the other one is not functioning. In lieu of this requirement, the Contractor may have a standby pump on the site during pumping.
- F. The minimum diameter of the hose (conduits) shall be four inches.
- G. Pumping equipment and hoses (conduits) that are not functioning properly shall be replaced.

3.07 ORDER OF PLACING CONCRETE

- A. In order to minimize the effects of shrinkage, the concrete shall be placed in units as bounded by construction joints shown on the Drawings and maximum lengths as indicated on Drawings. The placing of units shall be done by placing alternate units in a manner such that each unit placed shall be have cured at least seven days before the contiguous unit or units are placed, except that the corner sections of vertical walls shall not be placed until the two adjacent wall panels have cured at least 14 days.
- B. The surface of the concrete shall be level whenever a run of concrete is stopped.

3.08 DEFECTIVE CONCRETE

- A. As soon as forms are removed, all exposed surfaces shall be carefully examined and any irregularities shall be immediately rubbed or ground in a satisfactory manner in order to secure a smooth, uniform, and continuous surface. Plastering or coating of surfaces to be smoothed will not be permitted. No repairs shall be made until reviewed by the Engineer. In no case will extensive patching of honeycombed concrete be permitted. Concrete containing minor voids, holes, honeycombing, or similar depression defects shall have them repaired as specified herein. Concrete containing extensive voids, holes, honeycombing, or similar depression defects, shall be completely removed and replaced. All repairs and replacements herein specified shall be promptly executed by the Contractor at its own expense.
- B. Defective surfaces to be repaired as specified in Article 3.06, Paragraph A of this Section, shall be cut back from trueline a minimum depth of 1/2 inch over the entire area. Feathered edges will not be permitted. Where chipping or cutting tools are not required in order to deepen the area properly, the surface shall be prepared for bonding by the removal of all laitance or soft material, and not less than 1/32-inch depth of the surface film from all hard portions. The material used for repair proposed shall consist of a mixture of one sack of cement to 3 cubic feet of sand. For exposed walls, the cement shall contain such a proportion of Atlas white portland cement as is required to make the color of the patch match the color of the surrounding concrete.
- C. Holes left by tie-rod cones shall be repaired in an acceptable manner with dry-packed cement grout or premixed patching material as accepted by the Engineer.
- D. All repairs shall be built up and shaped in such a manner that the completed work will conform to the requirements of Article 3.04 or 3.06 of this Section, as applicable, using acceptable methods which will not disturb the bond, cause sagging, or cause horizontal fractures. Surfaces of said repairs shall receive the same kind and amount of curing treatment as required for the concrete in the repaired section.
- E. Prior to backfilling, all cracks that may have developed shall be "vee'd" and filled with sealant conforming to the requirements of Section 03290 entitled, " Joints in Concrete". This repair method shall be done on the faces of members in contact with fill.

3.09 CARE AND REPAIR OF CONCRETE

- A. The Contractor shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the Owner. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which may have been originally defective, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which, for any other reason, does not conform to the requirements of the Contract Documents, shall be satisfactorily repaired or removed and replaced with acceptable concrete at the Contractor's expense.

3.10 CONCRETE SEALER

- A. Contractor shall apply to the top surface of all finished concrete floor slabs and equipment pads a sealer specified in Section 09850 entitled "Painting".

END OF SECTION

SECTION 03350 CONCRETE FINISHES

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall furnish all materials, labor, and equipment required to provide finishes of all concrete surfaces specified herein and shown on the Drawings.

1.02 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.
1. ACI 301 -Specifications for Structural Concrete for Buildings
 2. ACI 318 - Building Code Requirements for Reinforced Concrete

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01300 entitled "Submittals".
1. Manufacturer's literature on all products specified herein.

PART 2 - PRODUCTS

2.01 CONCRETE FLOOR SEALER

- A. Floor sealer is specified in Section 03350-3.03.

PART 3 - EXECUTION

3.01 FINISHES ON FORMED CONCRETE SURFACES

- A. After removal of forms, the finishes described below shall be applied in accordance with Article 3.05 of this Section entitled "Concrete Finish Schedule". Unless the finish schedule specifies otherwise, all surfaces shall receive at least a Type I finish. The Engineer shall be the sole judge of acceptability of all concrete finish work.
1. Type I - Rough: All fins, burrs and other projections left by the forms shall be removed. All holes left by removal of ends of ties, and all other holes, depressions, or voids shall be filled solid with cement grout after first being

thoroughly wetted. Honeycombs shall be chipped back to solid concrete as directed, prior to patching with cement grout. Holes shall be filled with a small tool that will permit packing the hole solidly with cement grout. Cement grout shall consist of one part cement to three parts sand, and the amount of mixing water shall be as little as consistent with the requirements of handling and placing. Color of cement grout shall match the adjacent wall surface.

2. Type II - Grout Cleaned: Where this finish is required, it shall be applied after completion of Type I finish. After the concrete has been predampened, a slurry consisting of one part cement (including an appropriate quantity of white cement in order to produce a color matching the surrounding concrete) and 1-1/2 parts sand passing the No. 16 sieve, by damp loose volume, shall be spread over the surface with clean burlap pads or sponge rubber floats. Any surplus shall be removed by scraping and then rubbing with clean burlap. The finish shall be kept damp for at least 36 hours after application.
3. Type III - Smooth Rubbed: Where this finish is required, it shall be applied after the completion of the Type I finish. No rubbing shall be done before the concrete is thoroughly hardened and the mortar used for patching is firmly set. A smooth, uniform surface shall be obtained by wetting the surface and rubbing it with a carborundum stone to eliminate irregularities. Unless the nature of the irregularities require it, the general surface of the concrete shall not be cut into. Corners and edges shall be slightly rounded by the use of the carborundum stone. Brush finishing or painting with grout or neat cement will not be permitted.

3.02 SLAB AND FLOOR FINISHES

- A. The finishes described below shall be applied to floors, slabs, flow channels and top of walls in accordance with Article 3.05 of this Section entitled "Concrete Finish Schedule". The Engineer shall be the sole judge of acceptability of all such finish work.
 1. Type "A" - Screeded: This finish shall be obtained by placing screeds at frequent intervals and striking off to the surface elevation required. When a Type "F" finish is subsequently to be applied, the surface of the screeded concrete shall be roughened with a stiff brush or rake prior to final set.
 2. Type "B" - Wood Floated: This finish shall be obtained after completion of a Type "A" finish by working a previously screeded surface with a wood float until the desired texture is reached. Floating shall begin when the water sheen has disappeared and when the concrete has sufficiently hardened so that a person's foot leaves only a slight imprint. If wet spots occur, water shall be removed with a squeegee. Care shall be taken to prevent the formation of laitance and excess water on the finished surface. The finished surface shall be true, even, and free from blemishes and other irregularities.
 3. Type "C" - Cork Floated: This finish shall be similar to Type "B" but slightly smoother than that obtained with a wood float. It shall be obtained by power or band floating with cork floats.

4. Type "D" - Steel Toweled: This finish shall be obtained after completion of a Type "B" finish. When the concrete has hardened sufficiently to prevent excess fine material from working to the surface, the surface shall be compacted and smoothed with not less than two thorough and complete steel toweling operations. In areas which are to receive a floor covering such as tile, resilient flooring, or carpeting, only one toweling operation is required. The finish shall be brought to a smooth, dense surface, free from defects and blemishes.
5. Type "E" - Broom or Belt: This finish shall provide the surface with a transverse scored texture by drawing a broom or burlap belt across the surface immediately after completion of a Type "B" finish.
6. Type "F" - Swept in Grout Topping: This finish shall be applied after a completion of a Type "A" finish. The concrete surface shall be properly cleaned, washed, and coated with a mixture of water and Portland Cement. Cement grout in accordance with Section 03315 shall then be plowed and swept into neat conformance with the blades or arms of the apparatus by turning or rotating the previously positioned mechanical equipment. Special attention shall be paid to true grades, shapes and tolerances as specified by the manufacturer of the equipment. Before beginning this finish, the Contractor shall notify the Engineer and the equipment manufacturer of the details of the operation and obtain approval and recommendations.
7. Type "G" - Hardened Finish: Either a liquid hardened finish or an aggregate hardened finish shall be provided at the Contractor's option.
 - a. Liquid hardened finish shall be provided by application of a liquid floor hardener. Floors to receive this finish shall have previously received a Type "D" finish. Liquid hardener shall be applied between 30 to 60 days after concrete placement. Surface to be treated shall be dry, clean and free of all loose dust, dirt, oil, wax, sealers and curing compounds. Application procedure shall be in accordance with manufacturer's instructions and shall consist of a three-coat treatment.
 - b. Aggregate hardened finish shall be provided by applying an aggregate floor hardener concurrently with the application of a Type "D" finish. Application procedure shall be in accordance with manufacturer's instructions.
8. Type "H" - Non-Slip Finish: This finish shall be provided by applying a non-slip shake-on aggregate concurrently with the application of a Type "D" finish. Application procedure shall be in accordance with manufacturer's instructions.
9. Type "J" - Raked Finish: This finish shall be provided by raking the surface as soon as the condition of the concrete permits by making depressions of +/-1/4 inch.

3.03 SEALING OF CONCRETE FLOOR

- A. After installation of all equipment and piping, and after completion of other related construction activities, all floor slabs which are to remain unpainted and not intended

to be immersed shall be sealed with a "Sikagard 701W" floor sealer unless stated otherwise. Remove all dirt, droppage, oil, grease, asphalt or other foreign matter with caustics and detergents as required prior to application. Sealer shall be applied in accordance with the manufacturer's recommendations.

3.04 FINISHES ON EQUIPMENT PADS

- A. Formed surfaces of equipment pads shall receive a Type I finish.
- B. Top surfaces of equipment pads, except those surfaces subsequently required to receive non-shrink grout and support equipment bases, shall receive a Type "0" finish, unless otherwise noted. Surfaces which will later receive non-shrink grout shall, before the concrete takes its final set, be made rough by removing the sand and cement that accumulates on the top to the extent that the aggregate will be exposed with irregular indentations in the surface up to 1/2 inch deep.

3.05 CONCRETE FINISH SCHEDULE

| Item | Type of Finish |
|--|-----------------------|
| Exterior concrete walls below grade | I |
| Exterior exposed concrete walls and columns (including top of wall) to one foot below grade. All other exposed concrete surfaces not specified elsewhere | II |
| All interior exposed concrete vertical surfaces in buildings | III |
| Interior exposed ceiling, including beams | III |
| Floors of process equipment tanks or basins, and slabs to receive roofing material or waterproof membranes | B |
| All interior finish floors of buildings and structures and walking surfaces which will be continuously or intermittently wet | C |
| All interior finish floors of buildings and structures which are not continuously or intermittently wet | D |
| Floors to receive tile, resilient flooring, or carpeting | D |
| Concrete in flow channels | D |
| Exterior concrete sidewalks, steps, ramps and landings | E |
| Garage and storage area floors | G |
| Precast concrete form panels, hollow core planks, double tees | J |

*Finish shall be acceptable to the coating applicator and manufacturer. See Section 09912 entitled "Painting".

END OF SECTION

SECTION 03370 CONCRETE CURING

PART 1 - GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall protect all freshly deposited concrete from premature drying and from the weather elements. The concrete shall be maintained with minimal moisture loss at a relatively constant temperature for a period of time necessary for the hydration of the cement and proper hardening of the concrete in accordance with the requirements specified herein.

1.02 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.

| | |
|------------------------------------|--|
| ACI 301 | Specifications for Structural Concrete for Buildings |
| ACI 304 | Guide for Measuring, Mixing, Transporting, and Placing Concrete |
| ACI 305 | Hot Weather Concreting |
| ACI 306 | Cold Weather Concreting |
| ACI 308 | Standard Practice for Curing Concrete |
| ASTM C171 | Standard Specifications for Sheet Materials for Curing Concrete |
| ASTM C309 | Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete |
| Federal Specification TT -C-800 | |

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01300 entitled "Submittals".
1. Proposed procedures for protection of concrete under wet weather placement conditions.
 2. Proposed normal procedures for protection and curing of concrete.

3. Proposed special procedures for protection and curing of concrete under hot and cold weather conditions.
4. Proposed method of measuring concrete surface temperature changes.
5. Manufacturer's literature and material certification for proposed curing compounds.

PART 2 - PRODUCTS

2.01 LIQUID MEMBRANE-FORMING CURING COMPOUND

- A. Curing compound shall comply with ASTM C-309 Type I, Class B. B. Minimum solids content of curing compound shall be 30%.
- B. Moisture loss from concrete surface receiving compound shall not exceed 0.03 grams per square centimeter when applied at 300 square feet per gallon.
- C. The curing compound shall be an emulsion which is freeze-thaw stable and displays a white color that disappears when dry.
- D. Curing compound shall be SureCure 30 by Kaufman Products, Inc., CA D.O. T. Acrylic Cure by Symons Corporation, or Sealtight CS-309-30 by W. R. Meadows.

2.02 EVAPORATION REDUCER

- A. Evaporation reducer shall be Master Builders, "Confilm", or Euclid Chemical "Euco-Bar".

PART 3 - EXECUTION

3.01 PROTECTION AND CURING

- A. All freshly placed concrete shall be protected from the elements, flowing water and from defacement of any nature during construction operations.
- B. As soon as the concrete has been placed and horizontal top surfaces have received their required finish, provision shall be made for maintaining the concrete in a moist condition for at least a 5-day period thereafter except for high early strength concrete, for which the period shall be at least the first three days after placement. Horizontal surfaces shall be kept covered, and intermittent, localized drying will not be permitted.
- C. The Contractor shall use one of the following methods to insure that the concrete remains in a moist condition for the minimum period stated above.
 1. Ponding or continuous fogging or sprinkling.

2. Application of mats or fabric kept continuously wet.
 3. Continuous application of steam (under 150 degrees Fahrenheit)
 4. Application of sheet materials conforming to ASTM C171.
- D. The Contractor shall keep absorbent wood forms wet until they are removed. After form removal, the concrete shall be cured by one of the methods in paragraph C.
- E. Any of the curing procedures used in Article 3.01 Paragraph C of this Section may be replaced by one of the other curing procedures listed in Article 3.01 Paragraph C of this Section after the concrete is one-day old. However, the concrete surface shall not be permitted to become dry at any time.

3.02 CURING CONCRETE UNDER COLD WEATHER CONDITIONS

- A. Suitable means shall be provided for a minimum of 72 hours after placing concrete to maintain it at or above the minimum as placed temperatures specified in Section 03300 entitled "Cast-in-Place Concrete", for concrete work in cold weather. During the 72-hour period, the concrete surface shall not be exposed to air more than 20 degrees Fahrenheit above the minimum as placed temperatures.
- B. Stripping time for forms and supports shall be increased as necessary to allow for retardation in concrete strength caused by colder temperatures. This retardation is magnified when using concrete made with blended cements or containing fly ash or ground granulated blast furnace slag. Therefore, curing times and stripping times shall be further increased as necessary when using these types of concrete.
- C. The methods of protecting the concrete shall be such that will prevent local drying. Equipment and materials approved for this purpose shall be on the site in sufficient quantity before the work begins. The Contractor shall assist the Engineer by providing holes in the forms and the concrete in which thermometers can be placed to determine the adequacy of heating and protection.
- D. Curing procedures during cold weather conditions shall conform to the requirements of .~ ACI 306.

3.03 CURING CONCRETE UNDER HOT WEATHER CONDITIONS

- A. When air temperatures exceed 85 degrees Fahrenheit, the Contractor shall take extra care in placing and finishing techniques to avoid formation of cold joints and plastic shrinkage cracking. Temporary sun shades and/or windbreakers shall be erected to guard against such developments, including generous use of wet burlap coverings and fog sprays to prevent drying out of the exposed concrete surfaces.
- B. Immediately after screeding, horizontal surfaces shall receive an application of evaporation reducer. Apply in accordance with manufacturer's instructions. Final finish work shall begin as soon as the mix has stiffened sufficiently to support the workmen.

- C. Curing and protection of the concrete shall begin immediately after completion of the finishing operation. Continuous moist-curing consisting of method 1 or 2 listed in Article 3.01, Paragraph C of this Section is mandatory for at least the first 24 hours. Method 2 may be used only if the finished surface is not marred or blemished during contact with the coverings.
- D. At the end of the initial 24-hour period, curing and protection of the concrete shall continue for at least four additional days using one of the methods listed in Article 3.01, Paragraph C of this Section.
- E. Curing procedures during hot weather conditions shall conform to the requirements of ACI 305.

3.04 USE OF CURING COMPOUND

- A. Curing compound shall be used only where specifically approved by the Engineer. Curing compound shall not be used on surfaces to receive subsequent coatings. Curing compound shall not be used on surfaces exposed to water in potable water storage tanks and treatment plants unless curing compound is certified in accordance with ANSI/NSF Standard 61.
- B. When permitted, the curing compound shall maintain the concrete in a moist condition for the required time period, and the subsequent appearance of the concrete surface shall not be affected.
- C. The compound shall be applied in accordance with the manufacturer's recommendations after water sheen has disappeared from the concrete surface and after finishing operations. The rate of application shall not exceed 300 square feet per gallon. For rough surfaces, apply in two directions at right angles to each other.

3.05 EARLY TERMINATION OF CURING

- A. Moisture retention measures may be terminated earlier than the specified times only when at least one of the following conditions is met:
 - 1. The strength of the concrete reaches 85 percent of the specified 28-day compressive strength in laboratory-cured cylinders representative of the concrete in place, and the temperature of the in-place concrete has been constantly maintained at 50 degrees Fahrenheit or higher.
 - 2. The strength of concrete reaches the specified 28-day compressive strength as determined by accepted nondestructive methods or laboratory-cured cylinder test results.

3.06 CURING AND PROTECTION

- A. All concrete shall be cured for not less than 7 days after placing, in accordance with the methods specified herein for the different parts of the work, and described in detail in the following paragraphs:

| Surface to be Cured | Method |
|---|---------------|
| Unstripped forms | 1 |
| Construction joints | 2 |
| All concrete surfaces not specifically provided for elsewhere in this Paragraph | 3 |

- B. Materials for curing concrete as specified herein shall conform to the following requirements:
1. Concrete curing compound shall be MB 429 as manufactured by Master Builders, Cleveland, OH; Hunt Process Clear ARB as manufactured by Hunt Process Co., Santa Fe Springs, CA; Select Cure CRB as manufactured by Select Products Co., Upland, CA; or equal. The curing compound shall contain a fugitive dye so that areas of application will be readily distinguishable.
 2. Burlap mats: conform to ASTM Specification M182.
- C. Method 1
1. Wooden forms shall be wetted immediately after concrete has been placed and shall be kept wet with water until removed. If steel forms are used the exposed concrete surfaces shall be kept continuously wet until the forms are removed. If forms are removed within seven days of placing the concrete, curing shall be continued in accordance with Method 3.
- D. Method 2
1. The surface shall be covered with burlap mats which shall be kept wet with water for the duration of the curing period, until the concrete in the walls has been placed. No curing compound shall be applied to surfaces cured under Method 2.
- E. Method 3
1. The surface shall be sprayed with a liquid curing compound.
 2. It shall be applied in accordance with the manufacturer's printed instructions at a maximum coverage rate of 200 square feet per gallon and in such a manner as to cover the surface with a uniform film which will seal thoroughly.
 3. Where the curing compound method is used, care shall be exercised to avoid damage to the seal during the curing period. Should the seal be damaged or broken before the expiration of the curing period, the break shall be repaired immediately by the application of additional curing compound over the damaged portion.

4. Wherever curing compound may have been applied by mistake to faces against which concrete subsequently is to be placed and to which it is to adhere, said compound shall be entirely removed by wet sandblasting just prior to the placing of new concrete.
 5. Where curing compound is specified, it shall be applied as soon as the concrete has hardened enough to prevent marring on unformed surfaces, and within 2 hours after removal of forms from contact with formed surfaces. Repairs required to be made to formed surfaces shall be made within the said 2-hour period provided, however, that any such repairs which cannot be made within the said 2-hour period shall be delayed until after the curing compound has been applied. When repairs are to be made to an area on which curing compound has been applied, the area involved shall first be wet-sandblasted to remove the curing compound, following which repairs shall be made as provided herein.
- F. The Contractor shall protect all concrete against injury until final acceptance by the Owner. Fresh concrete shall be protected from damage due to rain. The Contractor shall provide such protection while the concrete is still plastic and whenever such precipitation is imminent or occurring.

END OF SECTION

DRAWING INDEX

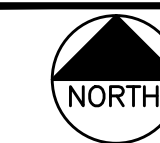
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|-----|---------------------------------|
| | COVER SHEET |
| G01 | GENERAL NOTES |
| G02 | EXISTING PLAN VIEW |
| G03 | SOIL BORING DATA |
| G04 | EROSION CONTROL PLAN |
| G05 | EROSION CONTROL DETAILS |
| D01 | DEMOLITION PLAN |
| D02 | DEMOLITION ELEVATION |
| S01 | STRUCTURAL PLAN |
| S02 | ENLARGED PLAN |
| S03 | CONTOUR PLAN |
| S04 | TRANSVERSE SECTION - THROAT |
| S05 | TRANSVERSE SECTION - MANGROVE |
| S06 | LONGITUDINAL SECTION - MANGROVE |
| S07 | MISCELLANEOUS DETAILS |
| L01 | OVERALL SITE IMPROVEMENTS |
| L02 | LANDSCAPE DETAILS / NOTES |



CITY OF FORT LAUDERDALE

**PROJECT #12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH**

1116 SW 15th AVENUE
FORT LAUDERDALE, FLORIDA



LOCATION SKETCH

**PROJECT #12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH**
1116 SW 15th AVENUE

 **CITY OF FORT LAUDERDALE**
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

FORT LAUDERDALE CITY COMMISSION

| | |
|-------------------|-----------------------------|
| DEAN J. TRANTALIS | MAYOR |
| HEATHER MORAITIS | COMMISSIONER - DISTRICT I |
| STEVEN GLASSMAN | COMMISSIONER - DISTRICT II |
| ROBERT McKINZIE | COMMISSIONER - DISTRICT III |
| BEN SORENSEN | COMMISSIONER - DISTRICT IV |

| | | |
|---------------------------|--------------------|------------------|
| PROJECT MANAGER | JOB TITLE | PHONE NO. |
| JEFFREY R. BERGMANN, P.E. | ENGINEER | 561-839-1721 |
| THOMAS WHITE | PROJECT MANAGER II | 954-828-5350 |

DATE: 12/14/2018

CAD FILE: 12201-000-017COVR

DRAWING FILE No.: 4-140-45

BID SET

WGI
ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

GENERAL SPECIFICATIONS:

LATEST EDITION OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

DATUM:

ALL ELEVATIONS SHOWN ARE NAVD '88.

UTILITIES:

NO EXISTING UTILITIES ARE AVAILABLE ON SITE FOR CONTRACTORS USE.

STAGING AREAS:

THE CONTRACTOR SHALL COORDINATE SELECTION AND REVIEW OF ANY PROPOSED STAGING AREAS ASSOCIATED WITH THIS PROJECT WITH CITY OF FORT LAUDERDALE (CITY). NO STAGING OF EQUIPMENT/VEHICLES WILL BE ALLOWED IN OR NEAR THE BANKS OF THE SOUTH FORK OF NEW RIVER.

ENVIRONMENTAL IMPACT:

- 1. IF SUSPECT CONTAMINATED OR HAZARDOUS MATERIAL IS FOUND ON THE PROJECT OR ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR SHALL CEASE OPERATION IN THAT AREA. IMMEDIATELY NOTIFY CITY AND PROTECT THE IMMEDIATE AREA OF SUSPECT CONTAMINATED OR HAZARDOUS MATERIAL FROM FURTHER ACCESS. CITY WILL ARRANGE FOR THE INVESTIGATION, IDENTIFICATION AND/OR REMOVAL/REMEDICATION OF THE MATERIAL IN QUESTION AS NEEDED.
2. THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT. SHOULD THE CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, THE CONTRACTOR SHALL REQUEST WRITTEN PERMISSION FROM THE CITY AND THE PROJECT ENGINEER. THE CONTRACTOR SHALL PROVIDE A COPY OF THE REQUEST TO THE CITY. THE CONTRACTOR SHALL PROVIDE THE (COUNTY STAFF) WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE, AND PROVIDE A DESCRIPTION OF THE SPECIFIC MANNER IN WHICH THE MATERIAL WILL BE USED. THE PROJECT ENGINEER SHALL COORDINATE WITH THE CITY PRIOR TO ISSUING WRITTEN APPROVAL TO THE CONTRACTOR. BECAUSE STATE LAW DOES NOT TREAT PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AS HAZARDOUS MATERIALS, SUCH PRODUCTS DO NOT REQUIRE AN MSDS SUBMITTAL. ALL BULK PETROLEUM PRODUCTS STORED ON SITE SHALL REQUIRE PROPER STORAGE WHICH INCLUDES SECONDARY CONTAINMENT.

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK - 2011:

THE PERMITTEE SHALL COMPLY WITH THE FOLLOWING CONDITIONS INTENDED TO PROTECT MANATEES FROM DIRECT PROJECT EFFECTS:

- a. ALL PERSONNEL ASSOCIATED WITH THE PROJECT SHALL BE INSTRUCTED ABOUT THE PRESENCE OF MANATEES AND MANATEE SPEED ZONES, AND THE NEED TO AVOID COLLISIONS WITH AND INJURY TO MANATEES. THE PERMITTEE SHALL ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING MANATEES WHICH ARE PROTECTED UNDER THE MARINE MAMMAL PROTECTION ACT, THE ENDANGERED SPECIES ACT, AND THE FLORIDA MANATEE SANCTUARY ACT.
b. ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION PROJECT SHALL OPERATE AT "IDLE SPEED/NO WAKE" AT ALL TIMES WHILE IN THE IMMEDIATE AREA AND WHILE IN WATER WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL FOLLOW ROUTES OF DEEP WATER WHENEVER POSSIBLE.
c. SILTATION OR TURBIDITY BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID MANATEE ENTANGLEMENT OR ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
d. ALL ON-SITE PROJECT PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S). ALL IN-WATER OPERATIONS, INCLUDING VESSELS, MUST BE SHUTDOWN IF A MANATEE(S) COMES WITHIN 50 FEET OF THE OPERATION. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS MOVED BEYOND THE 50-FOOT RADIUS OF THE PROJECT OPERATION, OR UNTIL 30 MINUTES ELAPSES IF THE MANATEE(S) HAS NOT REAPPEARED WITHIN 50 FEET OF THE OPERATION. ANIMALS MUST NOT BE HERDED AWAY OR HARASSED INTO LEAVING.
e. ANY COLLISION WITH OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE FWC HOTLINE AT 1-888-404-3922. COLLISION AND/OR INJURY SHOULD ALSO BE REPORTED TO THE U.S. FISH AND WILDLIFE SERVICE IN JACKSONVILLE (1-904-731-3336) FOR NORTH FLORIDA OR VERO BEACH (1-772-562-3909) FOR SOUTH FLORIDA, AND TO FWC AT ImperiledSpecies@myFWC.com
f. TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL IN-WATER PROJECT ACTIVITIES. ALL SIGNS ARE TO BE REMOVED BY THE PERMITTEE UPON COMPLETION OF THE PROJECT. TEMPORARY SIGNS THAT HAVE ALREADY BEEN APPROVED FOR THIS USE BY THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) MUST BE USED (SEE MYFWC.COM/MANATEE). ONE SIGN WHICH READS CAUTION: BOATERS MUST BE POSTED. A SECOND SIGN MEASURING AT LEAST 8 1/2" BY 11" EXPLAINING THE REQUIREMENTS FOR "IDLE SPEED/NO WAKE" AND THE SHUT DOWN OF IN-WATER OPERATIONS MUST BE POSTED IN A LOCATION PROMINENTLY VISIBLE TO ALL PERSONNEL ENGAGED IN WATER-RELATED ACTIVITIES. QUESTIONS CONCERNING THESE SIGNS CAN BE SENT TO THE EMAIL ADDRESS LISTED ABOVE.
g. FLOATING TURBIDITY BARRIER WITH FINE MESH SHALL BE USED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS, SECTION 104.

GENERAL NOTES:

- 1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND SITE DRAWINGS. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
2. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE SEAWALL AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE DOWNS.
3. THE LATEST EDITION FDOT INDEX AND SPECIFICATIONS SHALL BE USED, UNLESS OTHERWISE NOTED. (UON)
4. PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 556.105 FOR THE PROTECTION OF UNDERGROUND GAS PIPELINES.
5. GRADES SHOWN ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.
6. EXISTING SECTION, QUARTER SECTION CORNER, PROPERTY CORNERS, BROWARD COUNTY SURVEY CONTROL MONUMENTS AND ALL OTHER PERMANENT MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE REFERENCED PRIOR TO CONSTRUCTION AND RESTORED AFTER CONSTRUCTION BY A PROFESSIONAL SURVEYOR AND MAPPER.
7. EQUIPMENT USED FOR THE PROJECT SHALL BE LIMITED TO RUBBER Tired ONLY. TRACK EQUIPMENT SHALL BE ALLOWED ONLY IF SURFACE/GRADE PROTECTION METHODOLOGY IS SUBMITTED AND APPROVED BY CITY OF FORT LAUDERDALE. DAMAGE TO THE EXISTING SURFACE/GRADE RESULTING FROM THE CONSTRUCTION SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR.
8. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPMENT, OPERATION AND MAINTENANCE OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL SUBMIT TO THE CITY THE PROPOSED PLAN FOR REVIEW PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMISSION OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). THE CONTRACTOR SHALL SUBMIT THE NPDES PERMIT AS "OPERATOR AND UPON COMPLETION OF THE PROJECT PROVIDE CLOSURE DOCUMENTS TO FDEP. SHEETS G04 AND G05 INDICATES MINIMAL MEASUREMENTS TO BE INITIATED FOR THE OVERALL PROJECT.
10. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXISTING VEGETATION REMOVAL AND DISPOSAL PRIOR TO EXCAVATION; CANAL EXCAVATION EARTHWORK AND CANAL DRESSING IS REQUIRED TO PLACE THE SLOPE PROTECTION.
11. THE LIMESTONE STRATA ENCOUNTERED WITHIN THE PROJECT SITE CORRESPOND TO ROCK FORMATION THAT TYPICALLY OFFER HIGH RESISTANCE TO EXCAVATION. SPECIAL EQUIPMENT AND BREAKING TOOLS ARE TYPICALLY REQUIRED TO EXCAVATE THESE LIMESTONE LAYERS. THESE LIMESTONE LAYERS ARE ALSO DIFFICULT TO DEWATER DUE TO ITS HIGH POROSITY AND PERMEABILITY. FOR ANY EXCAVATION WORK, THESE LIMESTONE LAYERS MAY REQUIRE PREDRILLING/PUNCHING TO PREVENT REFUSAL CONDITIONS, STRUCTURAL DAMAGE, AND TO MINIMIZE VIBRATION - INDUCED SETTLEMENTS TO NEARBY STRUCTURES. THE COST OF PREDRILLING SHALL BE INCLUDED BY THE CONTRACTOR.
12. BACKSLOPE SHALL BE CONSTRUCTED USING CLEAN SAND FREE OF LARGE ROCKS AND ORGANIC DEBRIS. PORTIONS OF THE WATER SIDE OF THE CANAL BANKS NOT COVERED BY REVETMENT SHALL BE SODDED WITH BAHIA GRASS.
13. CONTRACTOR TO VERIFY ALL UTILITIES PRIOR TO WORK.
14. PROVIDE CONTINUOUS TEMPORARY EROSION AND SEDIMENT CONTROL (FDOT INDEX NO. 102) IN ALL AREAS UNDER CONSTRUCTION.
15. UNLESS OTHERWISE SHOWN, ALL EXISTING DRAINAGE STRUCTURES, WITHIN THE LIMITS OF CONSTRUCTION, ARE TO BE PROTECTED AND REMAIN IN SERVICE THROUGH THE DURATION OF THE PROJECT.
16. PIPES SHOWN ON DRAWINGS ARE APPROXIMATE. CONTRACTOR TO VERIFY SIZE, LOCATIONS, AND LENGTHS OF PIPE.

DESIGN DATA:

- 1. CODE: FLORIDA BUILDING CODE 2017, 8th EDITION.
2. ALL ELEVATIONS SHOWN REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88).
3. ELEVATION OF THE LOWEST FLOOR = N/A

WIND DESIGN IN ACCORDANCE WITH ASCE 7-10:

VELOCITY_U17 = 170 MPH (3 SEC.)
VELOCITY_ASD = 132 MPH (3 SEC.)
RISK CATEGORY II
EXPOSURE = C
GCpi = ±0.18
qt = 37.26 PSF (SERVICE)

SEISMIC DESIGN DATA:

RISK CATEGORY II
Ib = 1.0
Sa = 0.05
Sj = 0.03
SITE CLASS = D
SDs = 0.053
SD1 = 0.048
SEISMIC DESIGN CATEGORY = A
R = 1.5
Ca = 0.035
V = 0.035W

GEOTECHNICAL DESIGN DATA:

SEE SHEET G03

GROUND SNOW LOAD = 0 PSF

FLOOD ZONE AH

CHEMICAL ANCHORS:

- 1. SHALL BE AN EQUAL TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS EPCON CERAMIC-6 CARTRIDGE SYSTEM, OR ENGINEER APPROVED SUBSTITUTION, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE.

CONCRETE:

NOTE: CONCRETE TO BE IN COMPLIANCE WITH FDOT SPECIFICATIONS 346.

Table with 3 columns: CONCRETE CLASS, MINIMUM 28 DAY COMPRESSIVE STRESS, LOCATION OF CONCRETE IN STRUCTURE. Row 1: CLASS IV, fc' = 5.5, ALL CONCRETE

- 1. PROVIDE 3/4 INCH CHAMFERS ON ALL EXPOSED EDGES AND CORNERS EXCEPT AS OTHERWISE NOTED.
2. CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED ON THE PLANS, ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN WILL REQUIRE APPROVAL BY THE ENGINEER.

REINFORCEMENT:

- 1. REINFORCEMENT SHALL BE ASTM A615, GRADE 60.
2. ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCING ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
3. REINFORCEMENT DETAIL DIMENSIONS ARE OUT-TO-OUT OF BARS.

MINIMUM CONCRETE COVER:

CIP SUBSTRUCTURE/BENT CAP = 4 IN. FOR EXTERNAL SURFACES CAST AGAINST EARTH.
CIP SUBSTRUCTURE/BENT CAP = 4 IN. FOR OTHER EXTERNAL SURFACES.

CONCRETE COVERS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE TOLERANCES.

ENVIRONMENT:

SUPERSTRUCTURE: EXTREMELY AGGRESSIVE (INTRACOASTAL WATERWAY)
SUBSTRUCTURE: EXTREMELY AGGRESSIVE (INTRACOASTAL WATERWAY)
LOCATION: INTRACOASTAL WATERWAY

CONSTRUCTION WORK HOURS

WORK ON THE SEAWALL IS LIMITED TO 7:00 A.M. TO 6:00 P.M. MONDAY THRU SATURDAY. TEMPORARY LIGHTING IS REQUIRED TO WARN MARINE TRAFFIC OF HAZARDS DURING HOURS WHEN CONSTRUCTION IS NOT GOING ON. COST OF LIGHTING TO BE INCLUDED WITH THE MOBILIZATION PAY ITEM.

VIBRATION MONITORING:

THE SETTLEMENT OF STRUCTURES AND VIBRATION LEVELS SHALL BE MONITORED IN ACCORDANCE WITH FDOT SPECIFICATIONS 455-1.1. A PRE-CONSTRUCTION VIDEO RECORDING OF ALL STRUCTURES WITHIN THE DISTANCES SPECIFIED IN THE SPECIFICATIONS SHALL BE MADE.

ENGINEER: JEFFREY R. BERGMANN
DATE: NOV 01 09

DRAWN BY: D.A.M.
DESIGNED BY: SCALE: N/A
CHECKED BY: J.R.B.
FIELD BOOK: C.B.L.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

Table with 4 columns: NO., DATE, BY, DESCRIPTION. Row 1: 1, 08/30/2018, D.A.M., FT. BLDG. COMMENTS

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
GENERAL NOTES
1116 SW 15th AVENUE

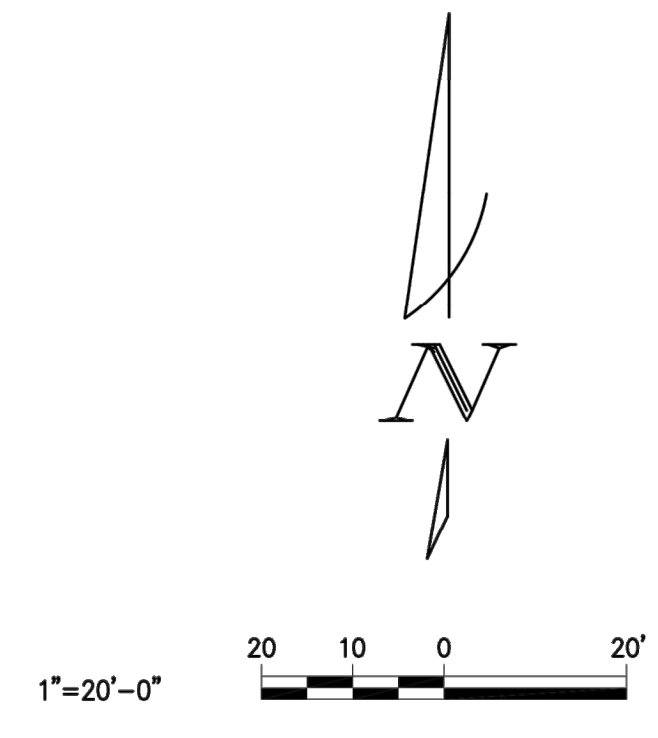
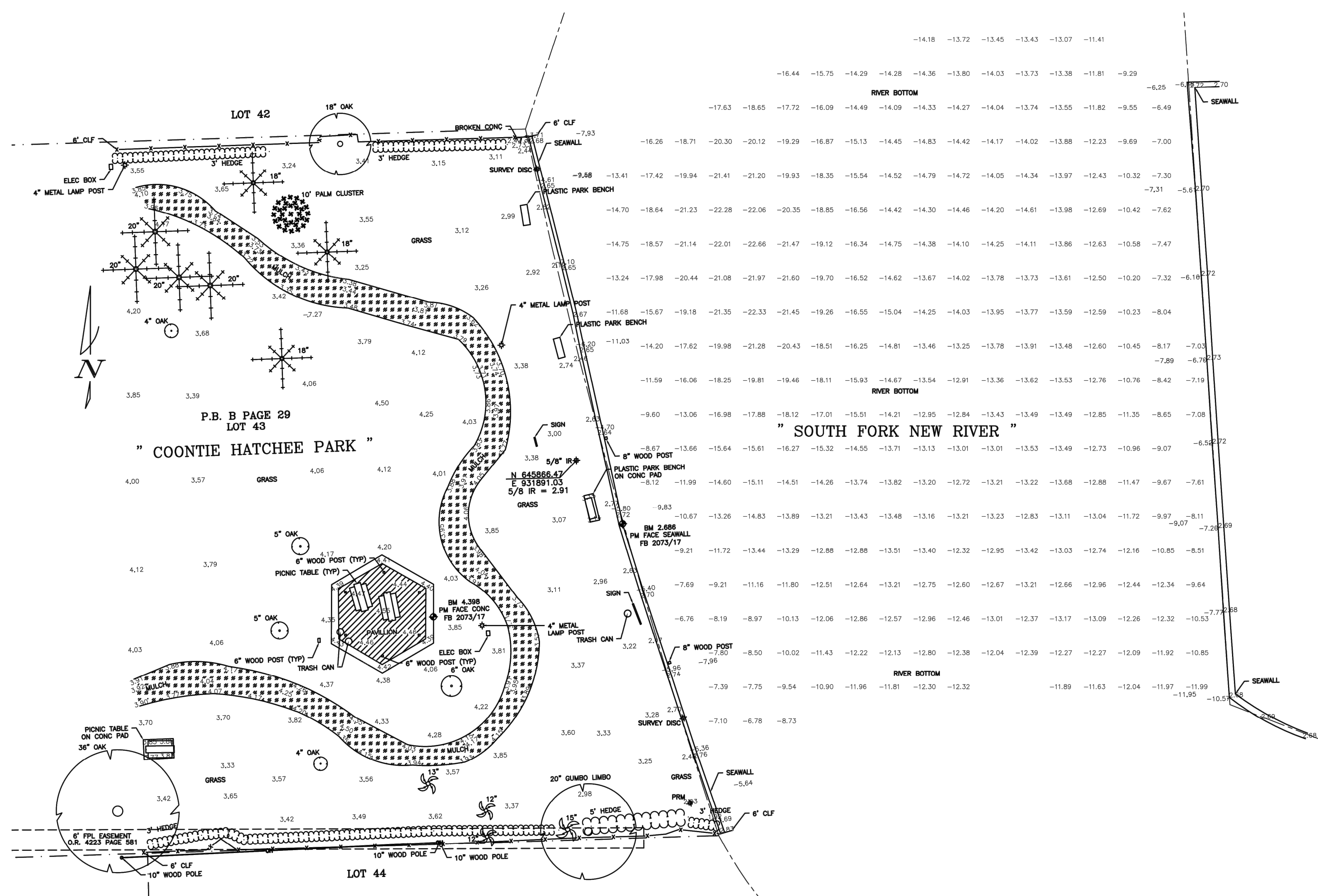
Table with 2 columns: SHEET NO., OF. Row 1: G01, 5. Row 2: TOTAL, 17.

WGI ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
2035 Vista Parkway West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055
WGI PROJECT NO. 08162059.01

BID SET

TOPOGRAPHIC SURVEY

"COONTIE HATCHEE PARK"



DESCRIPTION:

THE EAST 120 FEET LOT 43, "VALENTINE'S SUBDIVISION", ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK "B", PAGE 29, OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, SAID PROPERTY LOCATED IN THE CITY OF FORT LAUDERDALE, BROWARD COUNTY, FLORIDA. TOGETHER WITH: THE ADJACENT SOUTH FORK OF THE NEW RIVER.

NOTES:

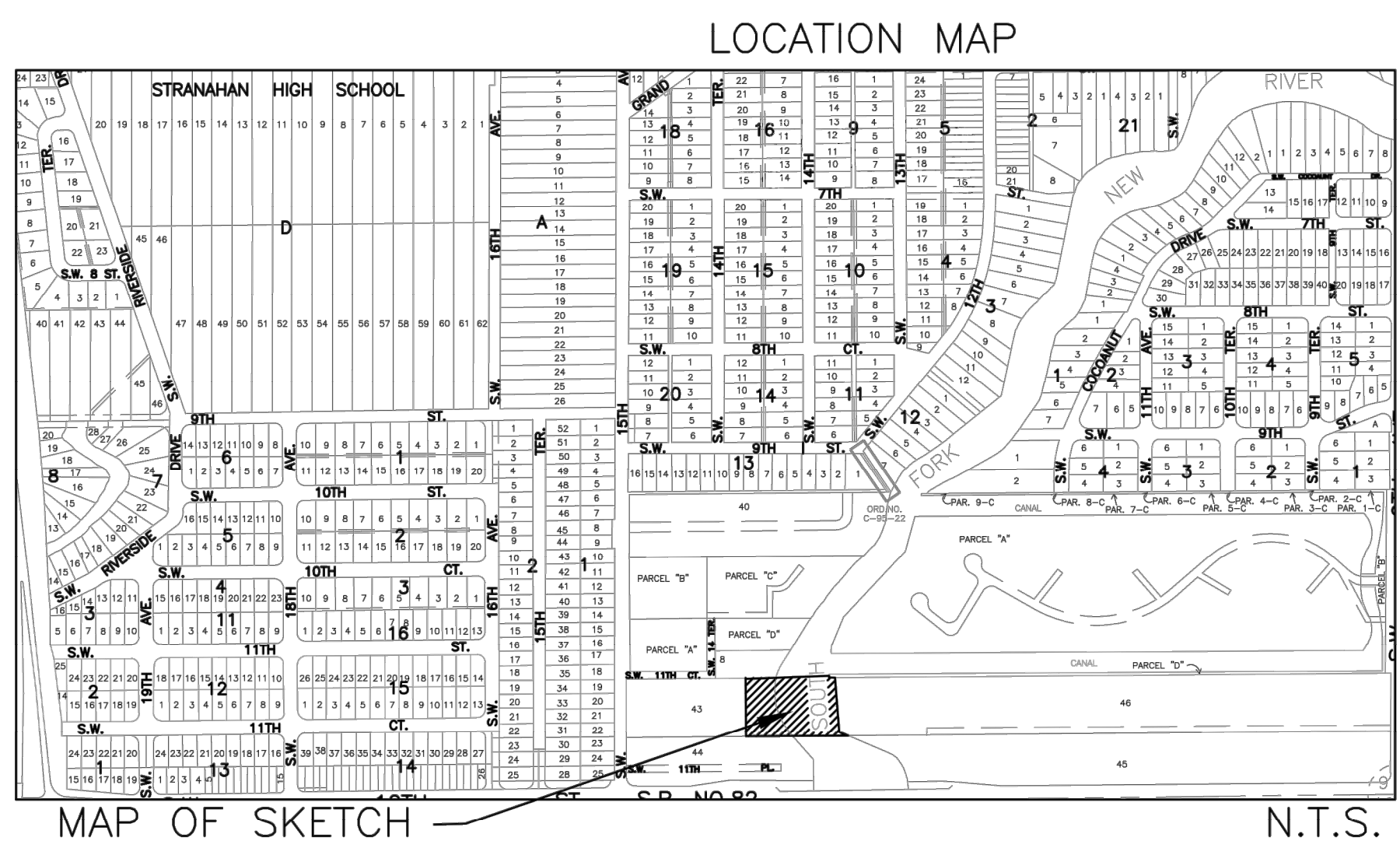
- 1) THIS TOPOGRAPHIC SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS AND SPOT ELEVATIONS WITHIN THE ABOVE DESCRIPTION, EXCEPT AS INDICATED, SUBJECT TO EXISTING EASEMENTS, RIGHT-OF-WAYS, COVENANTS, RESERVATIONS AND RESTRICTIONS OF RECORD, IF ANY.
- 2) THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
- 3) ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929) AND CONVERTED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). THE DATUM WAS CONVERTED FROM NGVD 1929 TO NAVD 1988 UTILIZING THE U.S. ARMY CORPS OF ENGINEERS PROGRAM VERTCON. THE MODEL VALUE OF (-1.585 WAS ADDED ALGEBRAICALLY TO THE NGVD 1929 HEIGHT.
- 4) BENCHMARK DESCRIPTION: CITY OF FORT LAUDERDALE BENCHMARK, FIELD BOOK 2073, PAGE 17, DESCRIBED AS FOLLOWS: SQUARE CUT AND PAINT MARK FACE OF SEAWALL W SIDE SOUTH FORK NEW RIVER & 96'+/- N OF S P/L "COONTIE HATCHEE PARK" ELEV = 4.276' (NGVD 1929) OR 2.686' (NAVD88).
- 5) ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.
- 6) THE HORIZONTAL POSITIONAL ACCURACY OF WELL DEFINED IMPROVEMENTS SHOWN HEREON IS ±0.2'. THE VERTICAL ACCURACY OF ELEVATIONS IS ±0.08'.
- 7) THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1" = 20' OR SMALLER.
- 8) PROPERTY LINES SHOWN ARE BASED ON ADJACENT PLATS AND ARE FOR INFORMATIONAL PURPOSES ONLY.
- 9) THIS IS NOT A BOUNDARY SURVEY
- 10) HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF SYMBOLS AND MAY HAVE BEEN ENLARGED FOR CLARITY. DISTANCES AND ELEVATIONS SHOWN HEREON ARE UNITED STATES SURVEY FEET.
- 11) ELEVATIONS SHOWN HEREON ARE UNITED STATES SURVEY FEET.
- 12) UNDERGROUND UTILITIES WERE NOT LOCATED.
- 13) THE HYDROGRAPIC SURVEY WAS PERFORMED USING A HYDROTRAC SINGLE BEAM SONAR UNIT AND PROCESSED USING HYPACK SOFTWARE FOR THE FINAL ELEVATIONS. DATE OF SOUNDING ACQUISITION WAS FEBRUARY 21, 2017.

CERTIFICATION:

THIS IS TO CERTIFY THAT THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES IN CHAPTER 5J-17.05 FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES. MADE UNDER MY RESPONSIBLE CHARGE AND IS ACCURATE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.
DATE OF LAST FIELD WORK FEBRUARY 22, 2017

MICHAEL W. DONALDSON
PROFESSIONAL SURVEYOR AND MAPPER
NO. 6490 STATE OF FLORIDA
SIGNED :

Michael W Donaldson
2017.03.03 10:47:28
-05'00'



LEGEND:

| SYMBOL | DESCRIPTION |
|--------|----------------------------|
| | BENCH MARK |
| | CHAIN LINK FENCE |
| | IRON ROD |
| | PERMANENT REFERENCE MARKER |
| | SURVEY MARKER |
| | PROPERTY LINE |
| | RIGHT-OF-WAY |

| | |
|--------------|----------|
| DATE: | 12-14-18 |
| DRAWN BY: | D.A.M. |
| DESIGNED BY: | J.R.B. |
| CHECKED BY: | C.B.L. |
| FIELD BOOK: | |

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CH'D | DESCRIPTION |
|-----|------|----|------|-------------|
| | | | | |
| | | | | |
| | | | | |

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
EXISTING PLAN VIEW
11116 SW 15th AVENUE

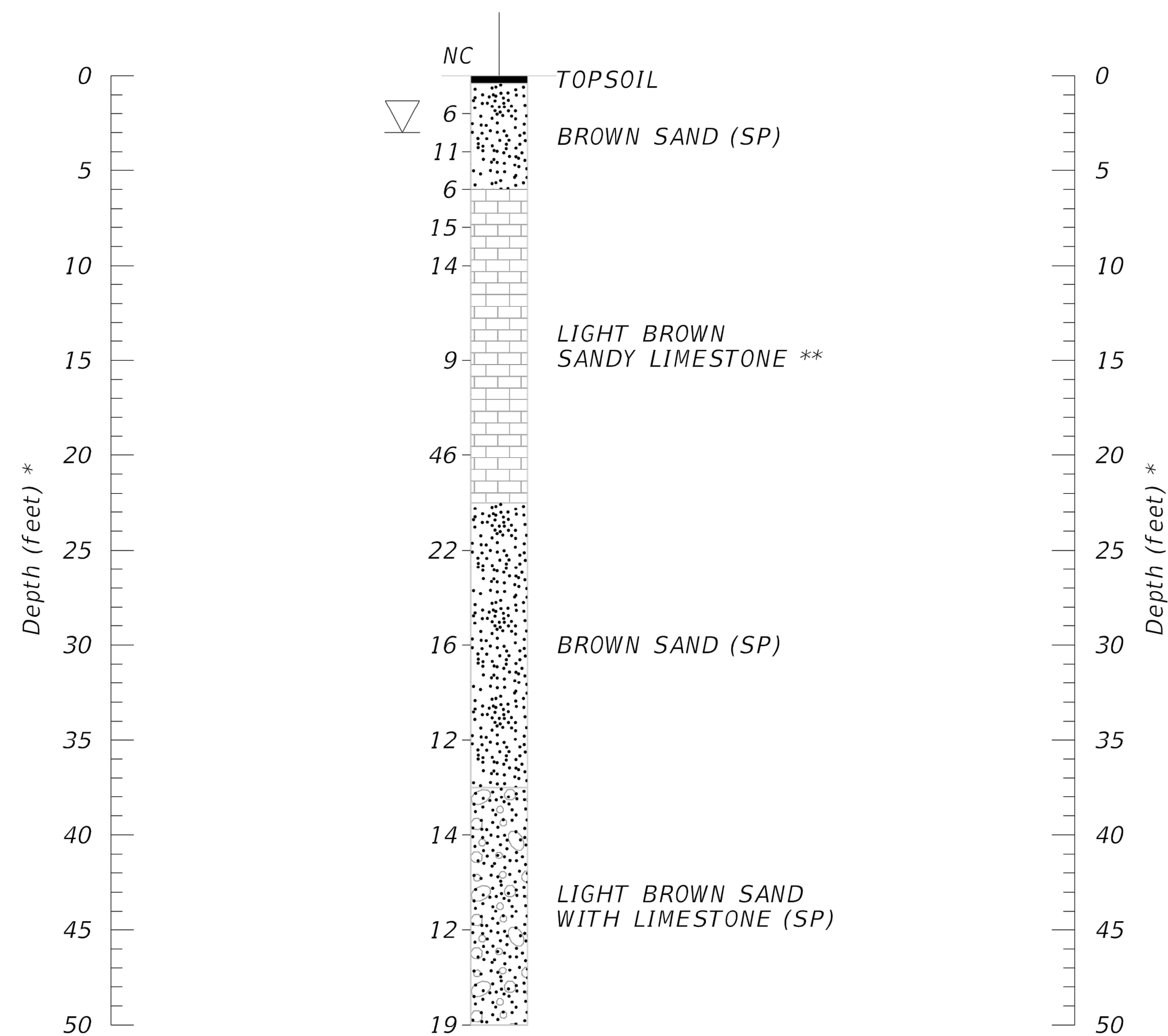
| | |
|------------------|----------------|
| SHEET NO. | OF |
| G02 | 5 |
| TOTAL: | 17 |
| CAD FILE: | 12201-G02-PLAN |
| DRAWING FILE NO. | 4-140-45 |

BOR # B-1
 DATE 7/24/2017
 HAMMER Auto
 RIG CME-45



BORING LOCATION PLAN

Approximate Location of Auger Boring



Boring Terminated at Depth of 50ft

LEGEND

- Topsoil
- Sand
- Limestone
- Gravelly Sand

NOTES

- ▽ ENCOUNTERED GROUNDWATER TABLE
- NC NUMBERS TO THE LEFT OF BORINGS INDICATE CORRECTED SPT VALUE FOR 12" PENETRATION USING AN AUTOMATIC HAMMER CORRECTION FACTOR OF 1.24
- * DENOTES DEPTH IN FEET FROM EXISTING GROUND SURFACE
- * * THE LIMESTONE STRATA ENCOUNTERED WITHIN THE PROJECT SITE CORRESPOND TO ROCK FORMATION THAT TYPICALLY OFFER HIGH RESISTANCE TO EXCAVATION. SPECIAL EQUIPMENT AND BREAKING TOOLS ARE TYPICALLY REQUIRED TO EXCAVATE THESE LIMESTONE LAYERS. THESE LIMESTONE LAYERS ARE ALSO DIFFICULT TO DEWATER DUE TO ITS HIGH POROSITY AND PERMEABILITY. FOR SHEET PILE, CONCRETE PILE/PANEL, AND OTHER RETAINING WALL/BULK HEAD SYSTEM RELATED WORK, THESE LIMESTONE LAYERS MAY REQUIRE PREDRILLING TO PREVENT REFUSAL CONDITIONS, STRUCTURAL DAMAGE, AND TO MINIMIZE VIBRATION - INDUCED SETTLEMENTS TO NEARBY STRUCTURES. THE COST OF PREDRILLING SHALL BE INCLUDED BY THE CONTRACTOR.

| | | |
|--------------------------|----------------------------|---|
| DRAWN BY: NG | APPROVED BY: RK | ENGINEER OF RECORD: RAJ KRISHNASAMY, P.E. |
| CHECKED BY: JO | DATE: 08-01-2017 | FLORIDA LICENSE NO.: 53567 |

RAJ KRISHNASAMY, P.E.
 P.E. LICENSE NUMBER 53567
 TIERRA SOUTH FLORIDA
 2765 VISTA PARKWAY, S-10
 WEST PALM BEACH, FL 33411
 CERTIFICATE OF AUTHORIZATION 28073

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| SCALE: NTS | PROJECT NUMBER: 7111-17-077 |
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GEOTECHNICAL ENGINEERING SERVICES
COONTIE HATCHEE CANOE LAUNCH
 FORT LAUDERDALE, FLORIDA

Sheet: **1**

| | |
|--------------|-------------|
| DRAWN BY: | DATE: |
| D.A.M. | 12-14-18 |
| DESIGNED BY: | SCALE: |
| J.R.B. | N/A |
| CHECKED BY: | C.B.L. |
| | FIELD BOOK: |

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE

 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | DESCRIPTION |
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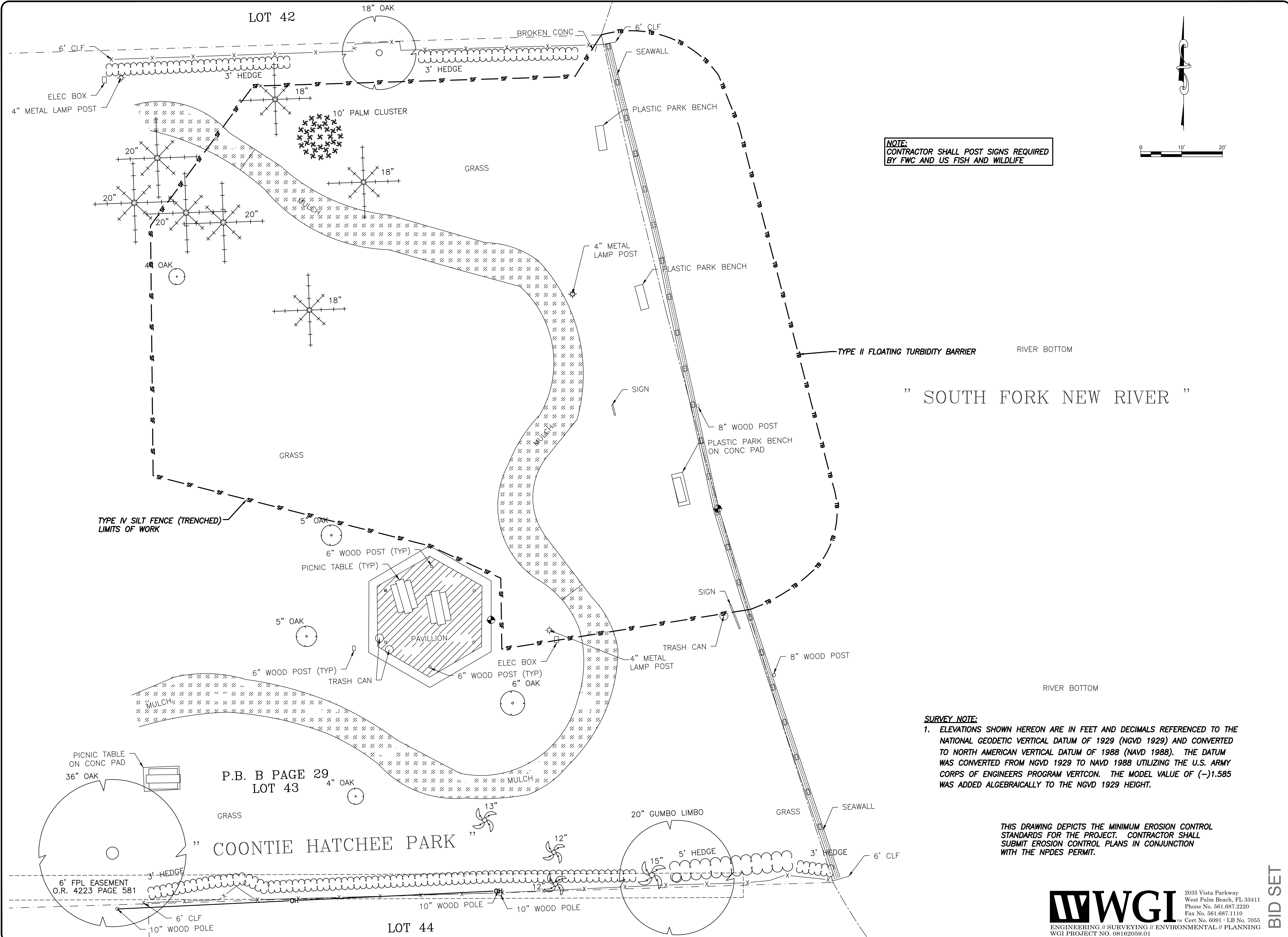
PROJECT # 12201
 COONTIE HATCHEE PARK
 CANOE/KAYAK LAUNCH
 SOIL BORING DATA
 1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| G03 | 5 |
| TOTAL: | 17 |
| CAD FILE: | 12201-G03-PLAN |
| DRAWING FILE NO. | 4-140-45 |

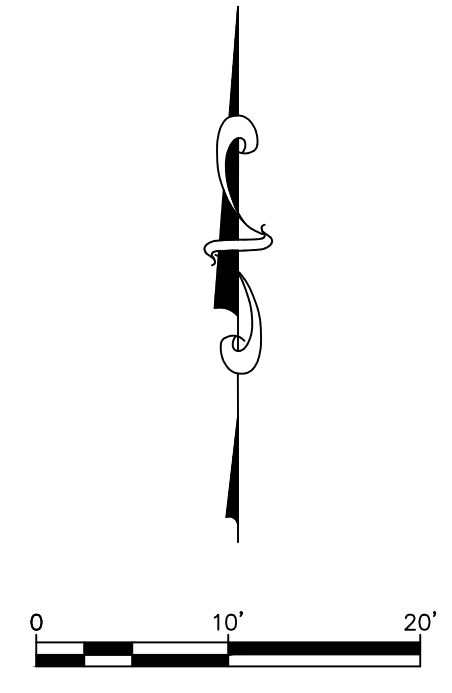
WGI
 ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
 WGI PROJECT NO. 08162059.01

2035 Vista Parkway
 West Palm Beach, FL 33411
 Phone No. 561.687.2220
 Fax No. 561.687.1110
 Cert No. 6091 - LB No. 7055

BID SET



NOTE:
 CONTRACTOR SHALL POST SIGNS REQUIRED
 BY FWC AND US FISH AND WILDLIFE



” SOUTH FORK NEW RIVER ”

SURVEY NOTE:
 1. ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929) AND CONVERTED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). THE DATUM WAS CONVERTED FROM NGVD 1929 TO NAVD 1988 UTILIZING THE U.S. ARMY CORPS OF ENGINEERS PROGRAM VERTCON. THE MODEL VALUE OF (-)1.585 WAS ADDED ALGEBRAICALLY TO THE NGVD 1929 HEIGHT.

THIS DRAWING DEPICTS THE MINIMUM EROSION CONTROL STANDARDS FOR THE PROJECT. CONTRACTOR SHALL SUBMIT EROSION CONTROL PLANS IN CONJUNCTION WITH THE NPDES PERMIT.

ENGINEER:
 JEFFREY R. BERGMANN
 DATE: NOV 19 2019

DATE: 12-14-18
 D.A.M.
 DESIGNED BY: SCALE: 1" = 10'
 J.R.B.
 CHECKED BY: C.B.L.
 FIELD BOOK:

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | DESCRIPTION |
|-----|------|----|-------------|
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PROJECT # 12201
 COONTIE HATCHEE PARK
 CANOE/KAYAK LAUNCH
 EROSION CONTROL PLAN
 1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| G04 | 5 |
| TOTAL: | 17 |
| CAD FILE: | 12201-G04-PLAN |
| DRAWING FILE NO. | 4-140-45 |

WGI
 ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
 WGI PROJECT NO. 08162059.01

2035 Vista Parkway
 West Palm Beach, FL 33411
 Phone No. 561.687.2220
 Fax No. 561.687.1110
 Cert No. 6091 - LB No. 7055

BID SET

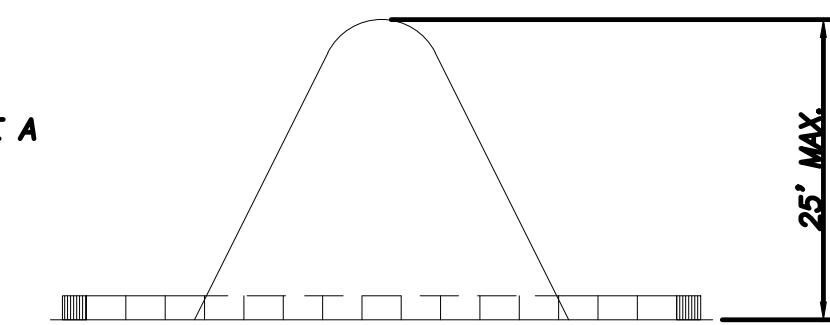
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EROSION CONTROL NOTES

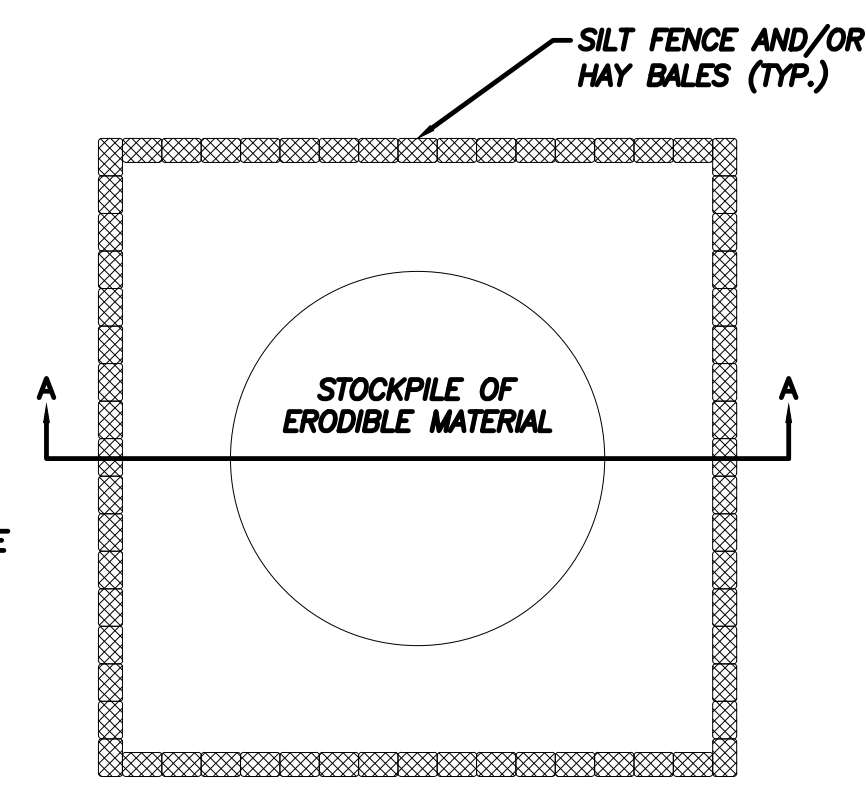
1. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN ONE YEAR.
4. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES SHALL BE STABILIZED, COVERED OR CONTAINED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
5. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED.
6. AFTER ANY SIGNIFICANT RAINFALL, SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
7. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, SLOPE DRAIN STRUCTURE OR APPROVED CONTROL.
8. SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM WATER SYSTEM, DITCH OR CHANNEL. ALL STORM WATER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
9. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION.
10. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED TO ENSURE INTENDED PURPOSE IS ACCOMPLISHED. THE DEVELOPER, OWNER AND/OR CONTRACTOR SHALL BE CONTINUALLY RESPONSIBLE FOR ALL SEDIMENT CONTROLS. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
11. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE WITH CURBS AND GUTTERS, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS TO LARGER LAND DISTURBING ACTIVITIES.

12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
13. PROPERTIES AND WATERWAYS DOWNSTREAM FROM CONSTRUCTION SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND EROSION AT ALL TIMES DURING CONSTRUCTION.
14. EROSION CONTROL DESIGN AND CONSTRUCTION SHALL FOLLOW THE REQUIREMENTS IN INDEX NUMBERS 101, 102 AND 103 OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS AND COUNTY PERMITS.
15. CONTRACTOR IS RESPONSIBLE FOR ALL SURFACE WATER DISCHARGES, RAINFALL RUN OFF OR DE-WATERING ACTIVITIES.
16. CONTRACTOR MUST INCORPORATE ALL BMP'S NECESSARY TO MEET OR EXCEED STATE WATER QUALITY AND SWPPP REQUIREMENTS.
17. THE POLLUTION PREVENTION PLAN IS A MINIMUM GUIDELINE ONLY. ADDITIONAL BMP'S MAY BE NECESSARY AT CONTRACTOR'S EXPENSE.
18. NOI TO BE POSTED ON SITE.
19. DE-WATERING ACTIVITIES:
 CONTRACTOR SHALL SUBMIT A DE-WATERING PLAN TO THE CITY OF FORT LAUDERDALE FOR REVIEW. THE DE-WATERING PLAN SHALL ADDRESS DE-WATERING HOLDING AREAS AND WATER QUALITY TREATMENT.
 A - DISCHARGE MUST NOT EXCEED STATE WATER QUALITY STANDARDS.
 B - CONTRACTOR MUST HAVE A TRANSFERABLE SFWMD CONSUMPTIVE USE PERMIT KNOWN AS A "NOTICED GENERAL PERMIT FOR SHORT TERM CONSTRUCTION DE-WATERING".
 C - NO HYDRAULIC PUMPS MAY BE USED FOR DE-WATERING UNLESS APPROVED BY THE WATER MANAGEMENT DISTRICT FOR THAT AREA.
 D - NO TURBID DISCHARGE. TURBIDITY READINGS ARE REQUIRED ONCE A WEEK AND MUST BE REPORTED TO THE PROJECT ENGINEER.

NOTE:
ALL STOCKPILES SHALL BE A
MAXIMUM OF 25' HIGH.



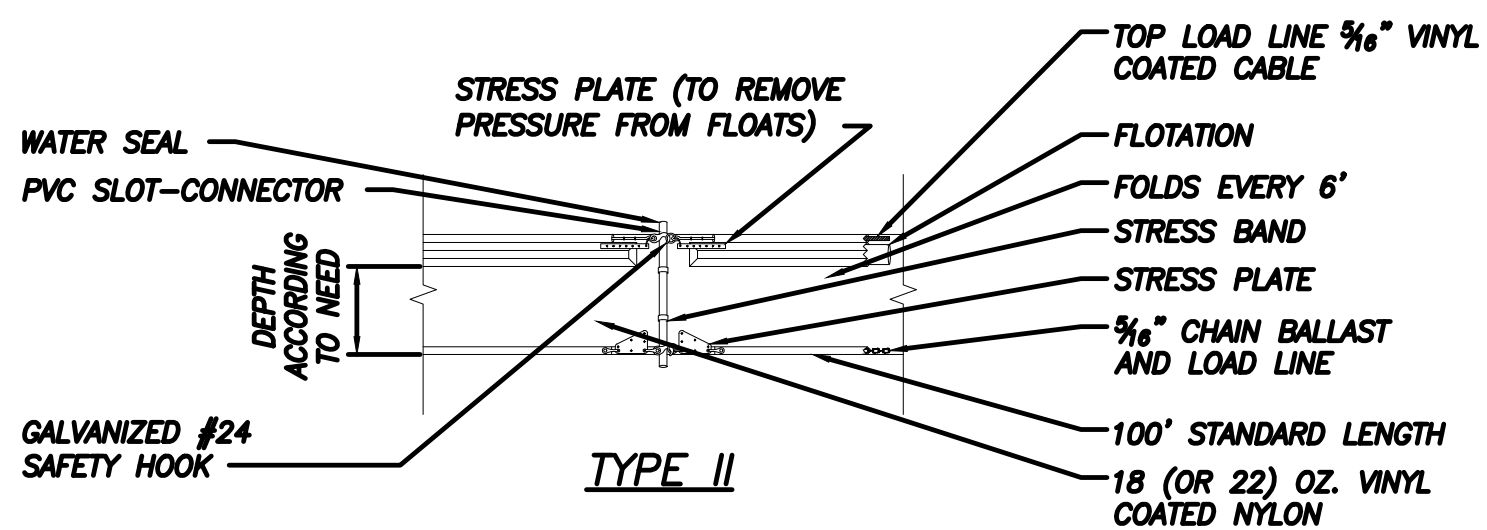
SECTION A-A



NOTE:
FOR STOCKPILING ERODIBLE
MATERIAL FOR EXTENDED
PERIODS, THE AREA SHALL
BE SEEDED AND MULCHED.

SEDIMENT CONTROL DETAIL FOR STOCKPILING OF ERODIBLE MATERIAL-N.T.S.

TYPE 2. DOT FOR HIGHER CURRENT WATERS (UP TO FIVE FEET PER SECOND): DEEPER LAKES, STREAMS, INTERCOASTAL AND TIDAL AREAS. INCLUDES AN ENCAPSULATED STEEL LOAD CABLE ALONG TOP OF BARRIER AND 8"x8"x4' FLOTATION LOGS. WEAR STRESS POINTS ARE REINFORCED WITH SHIELDS.

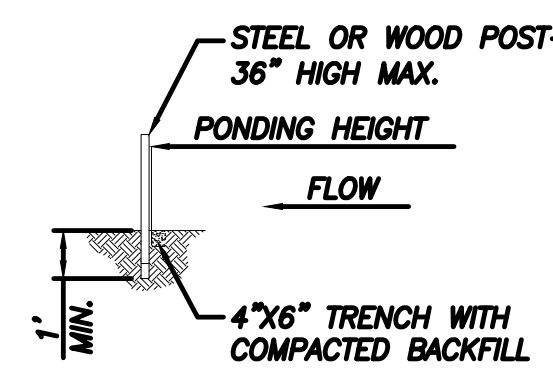
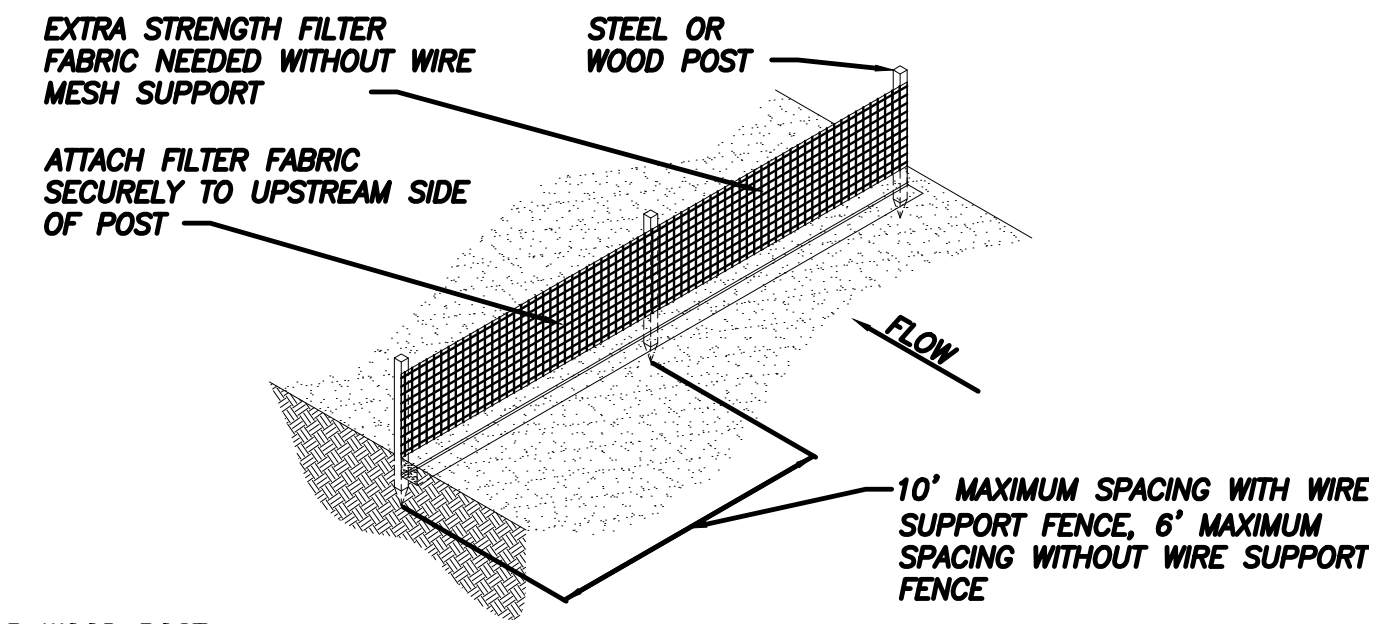


BLOW-UP OF SHACKLE CONNECTION

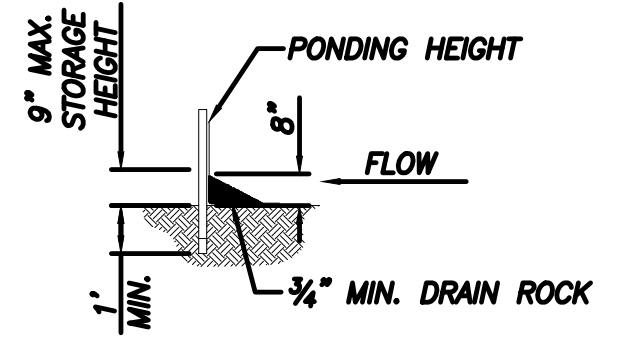
ORIENTATION WHEN INSTALLED (TIDAL SITUATION-TYPE III)-N.T.S.

NOTES:

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



TRENCH DETAIL



INSTALLATION WITHOUT TRENCHING

TYPE IV SILT FENCE-N.T.S.

ENGINEER: JEFFREY R. BERGMANN
 DATE: 12-14-18
 DESIGNED BY: J.R.B.
 CHECKED BY: C.B.L.
 FIELD BOOK:

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CHK'D | DESCRIPTION |
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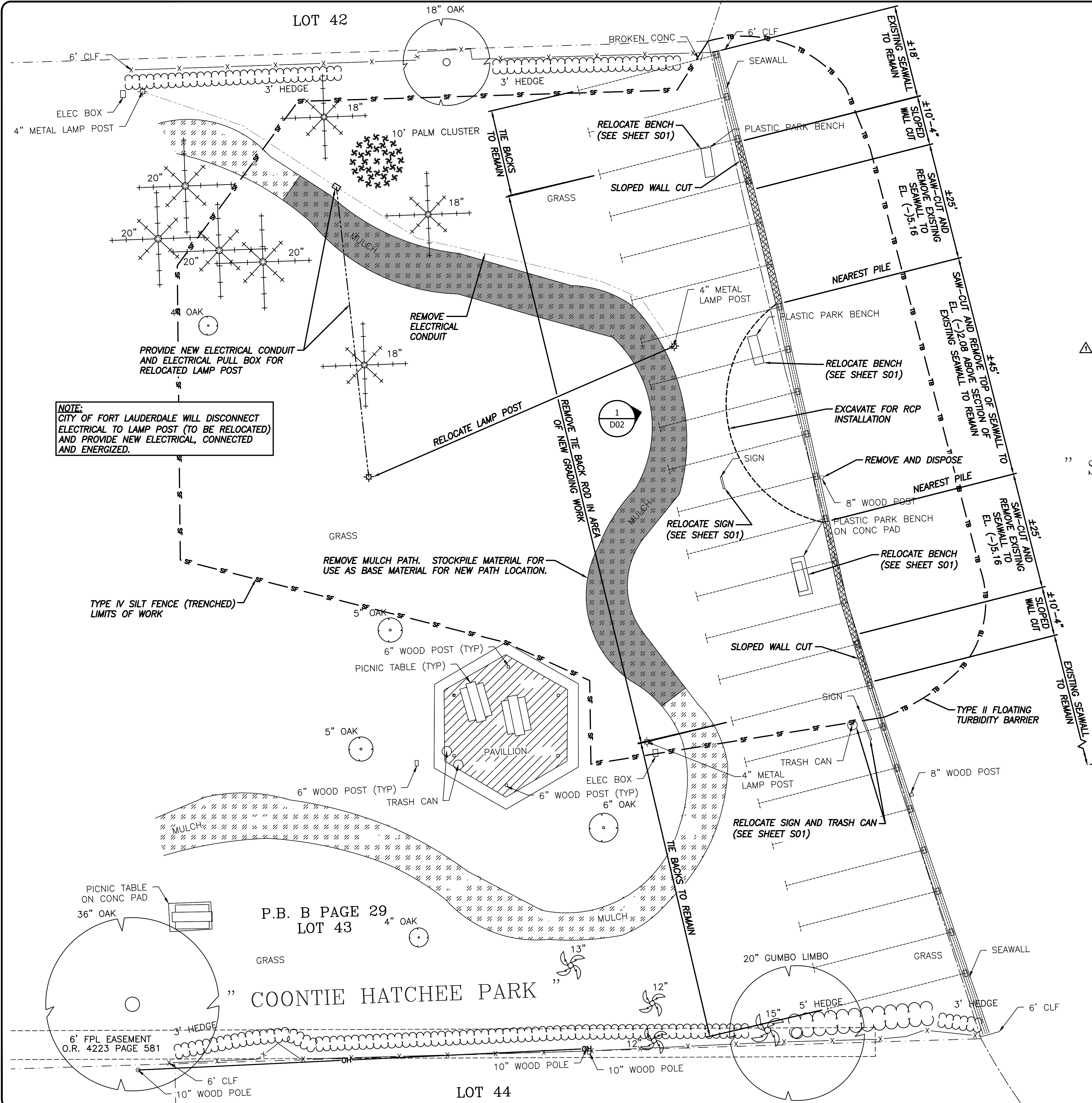
PROJECT # 12201
 COONTIE HATCHEE PARK
 CANOE/KAYAK LAUNCH
 EROSION CONTROL DETAILS
 1116 SW 15th AVENUE

| | |
|----------------------|---------------|
| SHEET NO. | OF |
| G05 | 5 |
| TOTAL: | 17 |
| CAD FILE: | 12201-G05-DET |
| ENGINEERING FILE NO. | 4-140-45 |
| DRAWING FILE NO. | 4-140-45 |

WGI
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 WGI PROJECT NO. 08162059.01

2035 Vista Parkway
 West Palm Beach, FL 33411
 Phone No. 561.687.2220
 Fax No. 561.687.1110
 Cert No. 6091 - LB No. 7055

BID SET

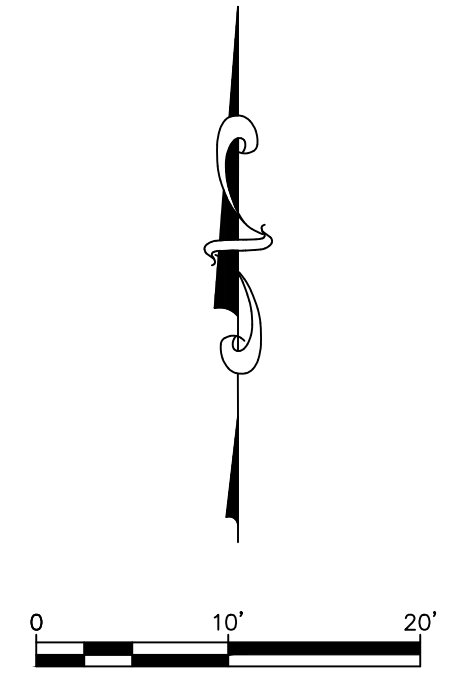


NOTE:
CITY OF FORT LAUDERDALE WILL DISCONNECT ELECTRICAL TO LAMP POST (TO BE RELOCATED) AND PROVIDE NEW ELECTRICAL, CONNECTED AND ENERGIZED.

- NOTE:**
- RCP "PLANTERS" TO BE PLACED AND EXCAVATION OF "BEACH" AREA TO BE SUBSTANTIALLY CONSTRUCTED PRIOR TO SEAWALL REMOVAL.
 - TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
 - RIP-RAP INSTALLATION WITHIN SOUTH FORK NEW RIVER SHALL BE COMPLETED PRIOR TO REMOVAL OF TIE BACKS AND WALL DEMOLITION.
 - EXISTING SEAWALL LENGTH IS ±211.75'. PROPOSED MODIFICATIONS TO THE SEAWALL EFFECT 105' WHICH REPRESENTS APPROXIMATELY 49% OF THE OVERALL SEAWALL LENGTH.

" SOUTH FORK NEW RIVER "

- SURVEY NOTE:**
- ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929) AND CONVERTED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). THE DATUM WAS CONVERTED FROM NGVD 1929 TO NAVD 1988 UTILIZING THE U.S. ARMY CORPS OF ENGINEERS PROGRAM VERTCON. THE MODEL VALUE OF (-)1.585 WAS ADDED ALGEBRAICALLY TO THE NGVD 1929 HEIGHT.



ENGINEER:
JEFFREY R. BERGMANN
DATE: NOV 01 09
DATE: 11/01/09

DRAWN BY: D.A.M.
DESIGNED BY: J.R.B.
CHECKED BY: C.B.L.
DATE: 12-14-18
SCALE: 1" = 10'
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CHK'D | DESCRIPTION | FT. BLDG. | COMMENTS |
|-----|------------|--------|--------|-------------|-----------|----------|
| 1 | 08/30/2018 | D.A.M. | J.R.B. | | | |

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
DEMOLITION PLAN
1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| D01 | 2 |
| TOTAL: | 17 |
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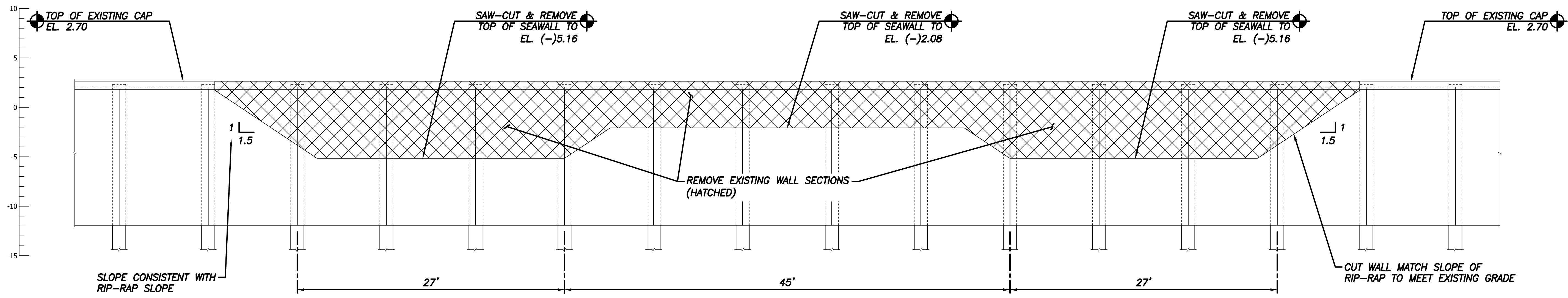
WGI
ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

BID SET

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- NOTE:**
- RCP "PLANTERS" TO BE PLACED AND EXCAVATION OF "BEACH" AREA TO BE SUBSTANTIALLY CONSTRUCTED PRIOR TO SEAWALL REMOVAL.
 - TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
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NOTE:
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1 DEMOLITION ELEVATION
D02 NOT TO SCALE

- SURVEY NOTE:**
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ENGINEER: JEFFREY R. BERGMANN
DATE: NOV 01 09
DATE: #R#E

DATE: 12-14-18
DESIGNED BY: D.A.M.
CHECKED BY: J.R.B.
FIELD BOOK: C.B.L.

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CHK'D | DESCRIPTION |
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| 1 | 08/30/2018 | D.A.M. | J.R.B. | FTL BLDG. COMMENTS |

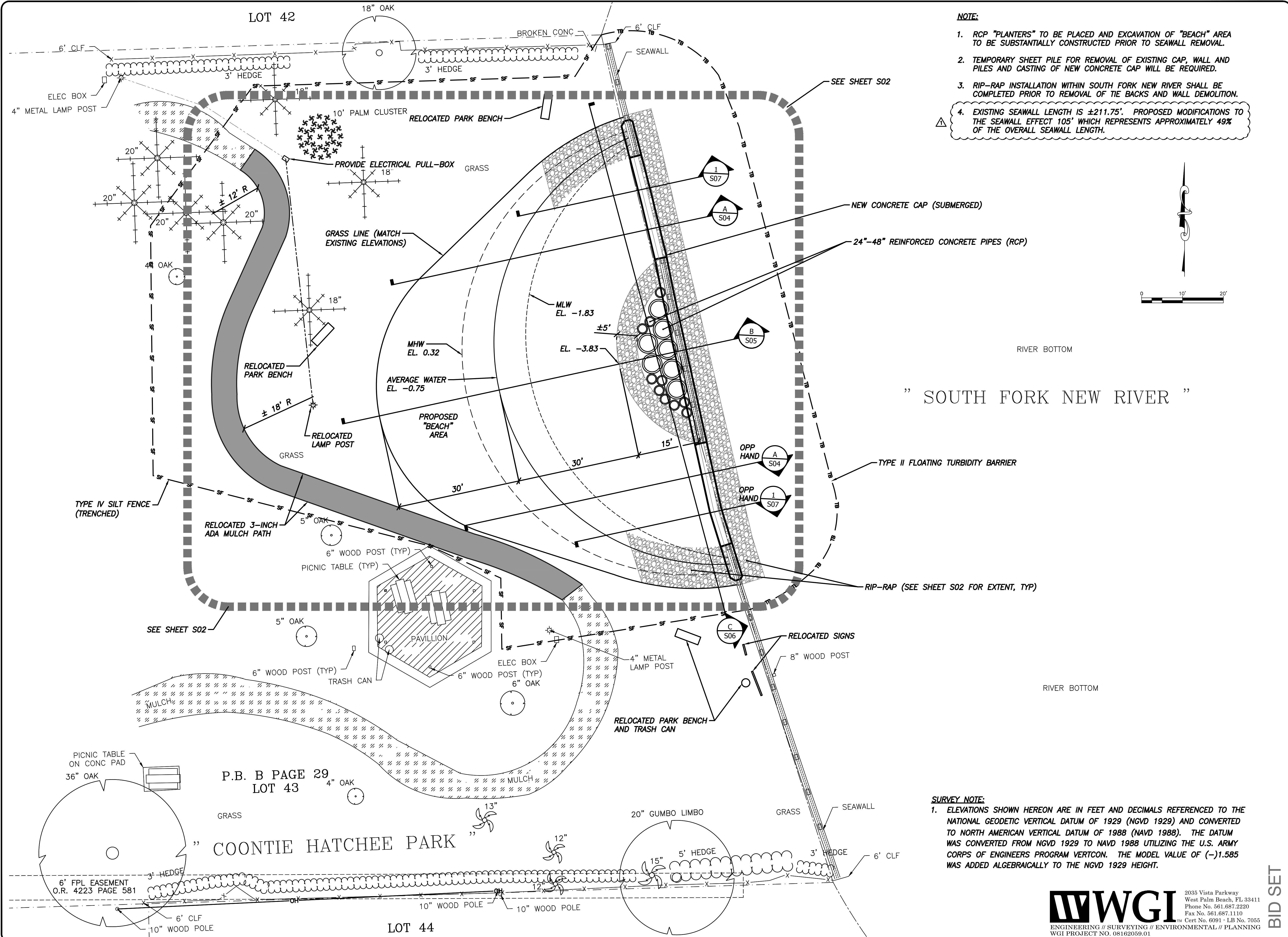
PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
DEMOLITION ELEVATION
1116 SW 15th AVENUE

| | |
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| SHEET NO. | OF |
| D02 | 2 |
| TOTAL: | 17 |
| CAD FILE: | 12201-D02-ELEV |
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ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

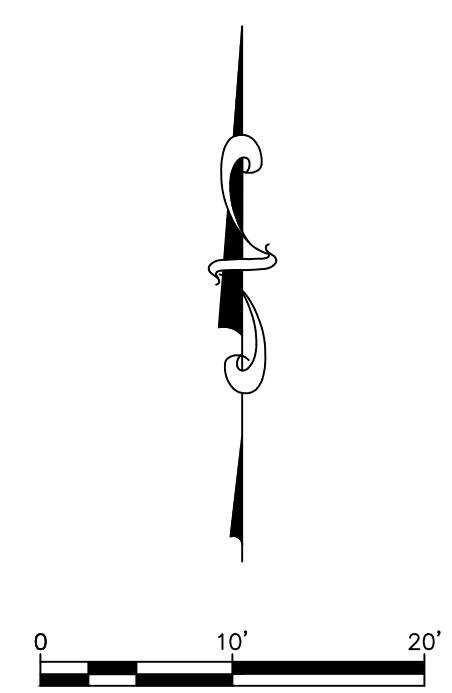
2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

BID SET



NOTE:

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4. EXISTING SEAWALL LENGTH IS ±211.75'. PROPOSED MODIFICATIONS TO THE SEAWALL EFFECT 105' WHICH REPRESENTS APPROXIMATELY 49% OF THE OVERALL SEAWALL LENGTH.



" SOUTH FORK NEW RIVER "

SURVEY NOTE:

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ENGINEER: JEFFREY R. BERGMANN
 DATE: NOV 2019
 DATE PLOTTED: 11/17/2019

DRAWN BY: D.A.M. DATE: 12-14-18
 DESIGNED BY: SCALE: 1" = 10'
 J.R.B. CHECKED BY: C.B.L.
 FIELD BOOK:

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 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | DESCRIPTION | FT. BLDG. | COMMENTS |
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| 1 | 08/30/2018 | D.A.M. | J.R.B. | | |

PROJECT # 12201
 COONTIE HATCHEE PARK
 CANOE/KAYAK LAUNCH
 STRUCTURAL PLAN
 1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| S01 | 7 |
| TOTAL: | 17 |
| CAD FILE: | 12201-S01-PLAN |
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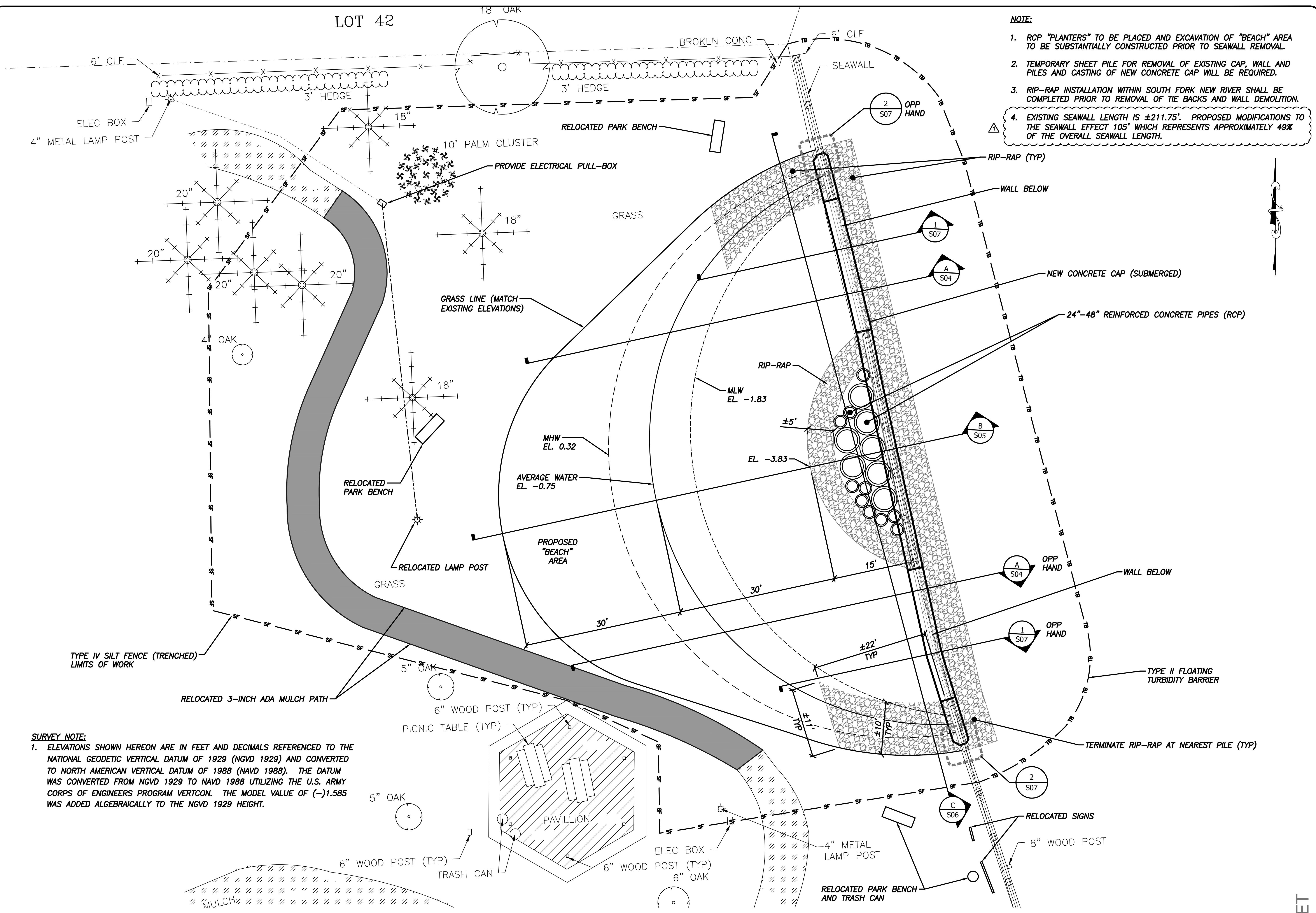
WGI
 ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
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2035 Vista Parkway
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BID SET

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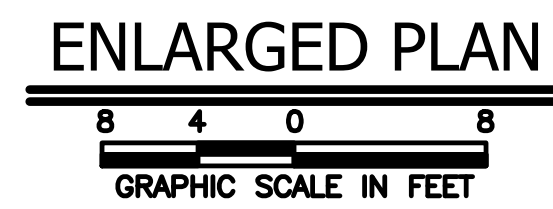
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- NOTE:**
1. RCP "PLANTERS" TO BE PLACED AND EXCAVATION OF "BEACH" AREA TO BE SUBSTANTIALLY CONSTRUCTED PRIOR TO SEAWALL REMOVAL.
 2. TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
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ENGINEER: JEFFREY R. BERGMANN
 DATE: NOV 19 2019

DRAWN BY: DATE: 12-14-18
 D.A.M.
 DESIGNED BY: SCALE: 1" = 5'
 J.R.B.
 CHECKED BY: C.B.L.
 FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CHK'D | DESCRIPTION |
|-----|------------|--------|--------|---------------------|
| 1 | 08/30/2018 | D.A.M. | J.R.B. | FTL. BLDG. COMMENTS |

PROJECT # 12201
 COONTIE HATCHEE PARK
 CANOE/KAYAK LAUNCH
 ENLARGED PLAN
 1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| S02 | 7 |
| TOTAL: | 17 |
| CAD FILE: | 12201-S02-PLAN |
| DRAWING FILE NO. | 4-140-45 |

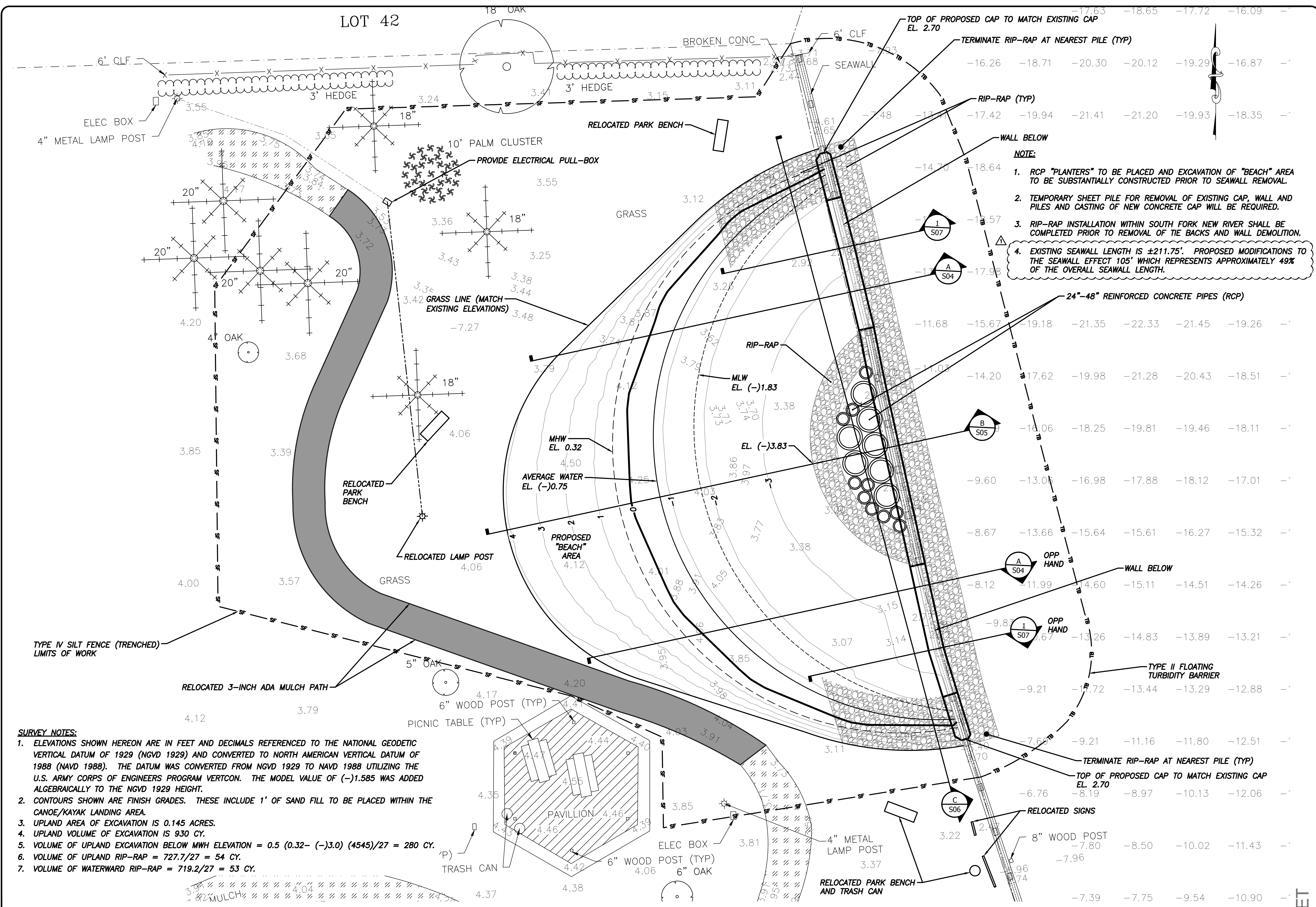
WGI
 ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
 WGI PROJECT NO. 08162059.01

2035 Vista Parkway
 West Palm Beach, FL 33411
 Phone No. 561.687.2220
 Fax No. 561.687.1110
 Cert No. 6091 - LB No. 7055

BID SET

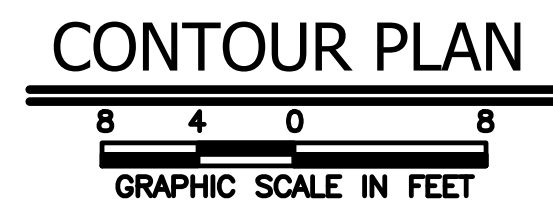
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LOT 42



- NOTE:**
- RCP "PLANTERS" TO BE PLACED AND EXCAVATION OF "BEACH" AREA TO BE SUBSTANTIALLY CONSTRUCTED PRIOR TO SEAWALL REMOVAL.
 - TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
 - RIP-RAP INSTALLATION WITHIN SOUTH FORK NEW RIVER SHALL BE COMPLETED PRIOR TO REMOVAL OF TIE BACKS AND WALL DEMOLITION.
 - EXISTING SEAWALL LENGTH IS ±211.75'. PROPOSED MODIFICATIONS TO THE SEAWALL EFFECT 105' WHICH REPRESENTS APPROXIMATELY 49% OF THE OVERALL SEAWALL LENGTH.

- SURVEY NOTES:**
- ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929) AND CONVERTED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). THE DATUM WAS CONVERTED FROM NGVD 1929 TO NAVD 1988 UTILIZING THE U.S. ARMY CORPS OF ENGINEERS PROGRAM VERTCON. THE MODEL VALUE OF (-)1.585 WAS ADDED ALGEBRAICALLY TO THE NGVD 1929 HEIGHT.
 - CONTOURS SHOWN ARE FINISH GRADES. THESE INCLUDE 1' OF SAND FILL TO BE PLACED WITHIN THE CANOE/KAYAK LANDING AREA.
 - UPLAND AREA OF EXCAVATION IS 0.145 ACRES.
 - UPLAND VOLUME OF EXCAVATION IS 930 CY.
 - VOLUME OF UPLAND EXCAVATION BELOW MHW ELEVATION = 0.5 (0.32- (-)3.0) (4545)/27 = 280 CY.
 - VOLUME OF UPLAND RIP-RAP = 727.7/27 = 54 CY.
 - VOLUME OF WATERWARD RIP-RAP = 719.2/27 = 53 CY.



ENGINEER: JEFFREY R. BERGMANN
 DATE: NOV 01 09
 DATE PLOT: 11/1/09
 TEL: (561) 899-1721
 FAX: (561) 897-1110

DRAWN BY: D.A.M.
 DESIGNED BY: J.R.B.
 CHECKED BY: C.B.L.
 DATE: 12-14-18
 SCALE: 1" = 5'
 FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CHK'D | DESCRIPTION | REVISIONS |
|-----|------------|--------|--------|--------------------|-----------|
| 1 | 08/30/2018 | D.A.M. | J.R.B. | FTL BLDG. COMMENTS | |

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
CONTOUR PLAN
1116 SW 15th AVENUE

SHEET NO. **S03** OF **7**

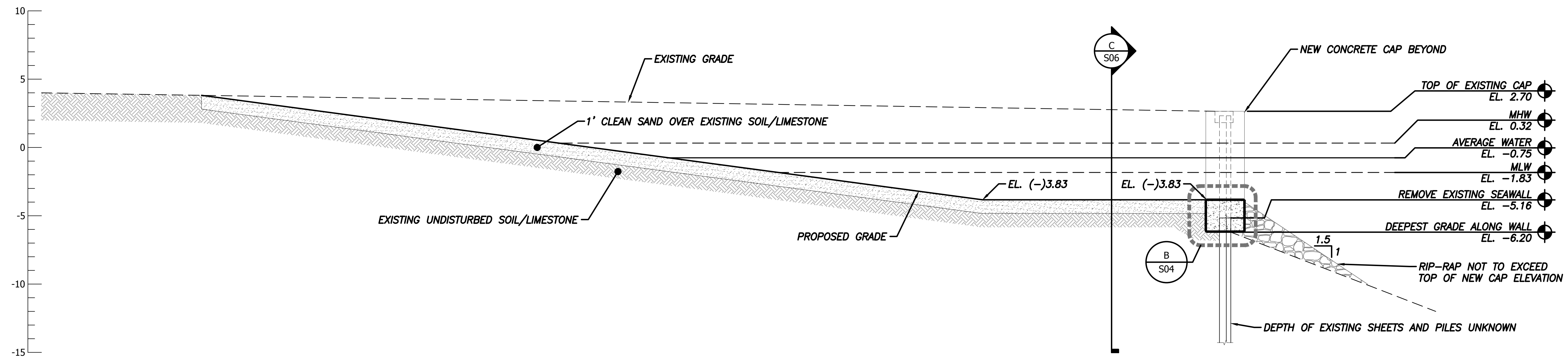
TOTAL: 17
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 DRAWING FILE NO. 4-140-45

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 WGI PROJECT NO. 08162059.01

2035 Vista Parkway
 West Palm Beach, FL 33411
 Phone No. 561.687.2220
 Fax No. 561.687.1110
 Cert No. 6091 - LB No. 7055

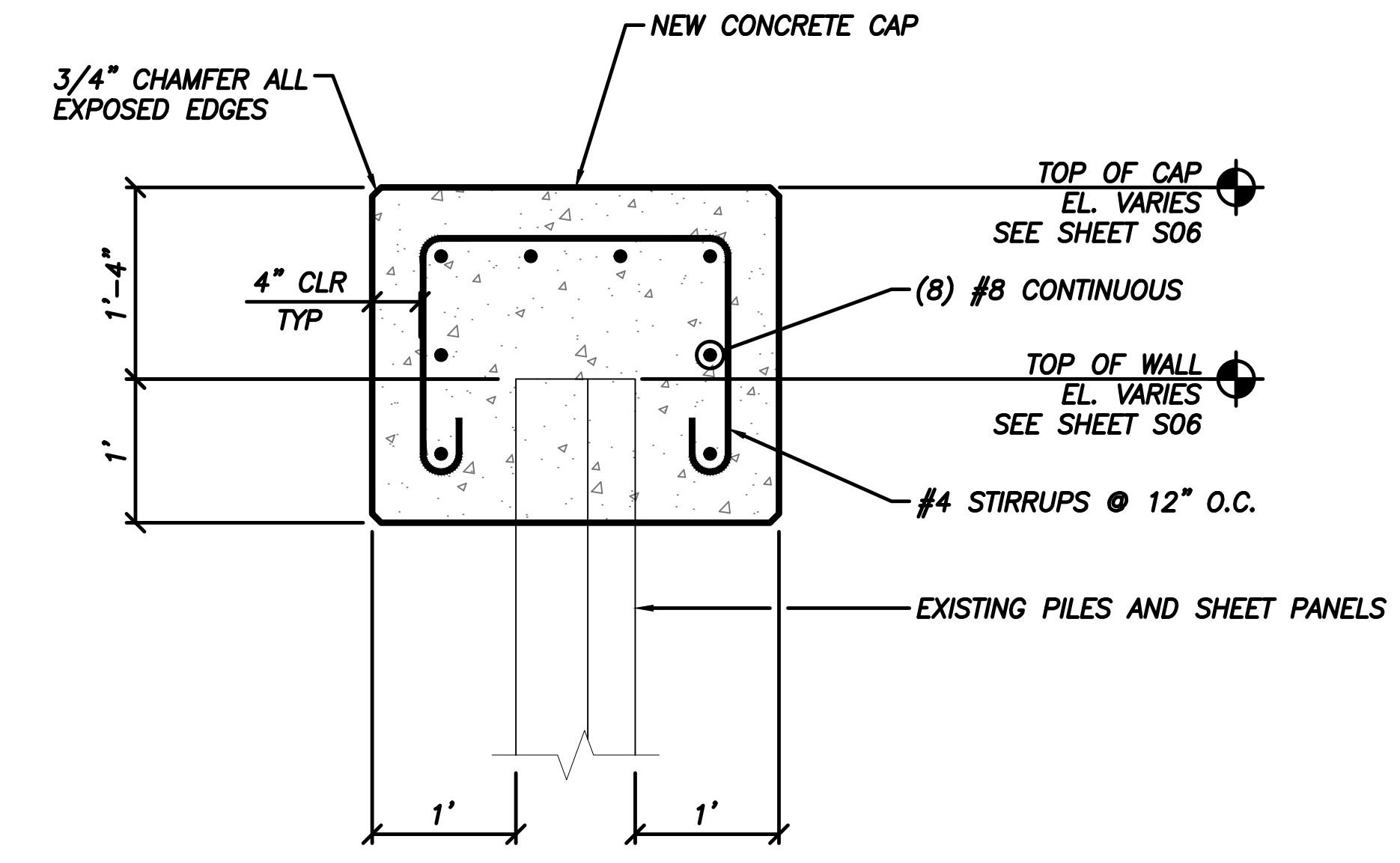
BID SET

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A
S04
TRANSVERSE SECTION - THROAT
4 2 0 4
GRAPHIC SCALE IN FEET

NOTE:
LIMESTONE WILL REQUIRE EXCAVATION TO ACHIEVE FINISH GRADES SHOWN ON DRAWINGS.



B
S04
NEW CONCRETE CAP SECTION
1 0.5 0 1
GRAPHIC SCALE IN FEET

NOTE:

1. RCP "PLANTERS" TO BE PLACED AND EXCAVATION OF "BEACH" AREA TO BE SUBSTANTIALLY CONSTRUCTED PRIOR TO SEAWALL REMOVAL.
2. TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
3. RIP-RAP INSTALLATION WITHIN SOUTH FORK NEW RIVER SHALL BE COMPLETED PRIOR TO REMOVAL OF TIE BACKS AND WALL DEMOLITION.
4. EXISTING SEAWALL LENGTH IS ±211.75'. PROPOSED MODIFICATIONS TO THE SEAWALL EFFECT 105' WHICH REPRESENTS APPROXIMATELY 49% OF THE OVERALL SEAWALL LENGTH.

SURVEY NOTES:

1. ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929) AND CONVERTED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988). THE DATUM WAS CONVERTED FROM NGVD 1929 TO NAVD 1988 UTILIZING THE U.S. ARMY CORPS OF ENGINEERS PROGRAM VERTCON. THE MODEL VALUE OF (-)1.585 WAS ADDED ALGEBRAICALLY TO THE NGVD 1929 HEIGHT.
2. CONTOURS SHOWN ARE FINISH GRADES. THESE INCLUDE 1' OF SAND FILL TO BE PLACED WITHIN THE CANOE/KAYAK LANDING AREA.

ENGINEER: JEFFREY R. BERGMANN
DATE: NOV 01 09
DATE: #DATE

DRAWN BY: D.A.M.
DESIGNED BY: J.R.B.
CHECKED BY: C.B.L.
DATE: 12-14-18
SCALE: AS SHOWN
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

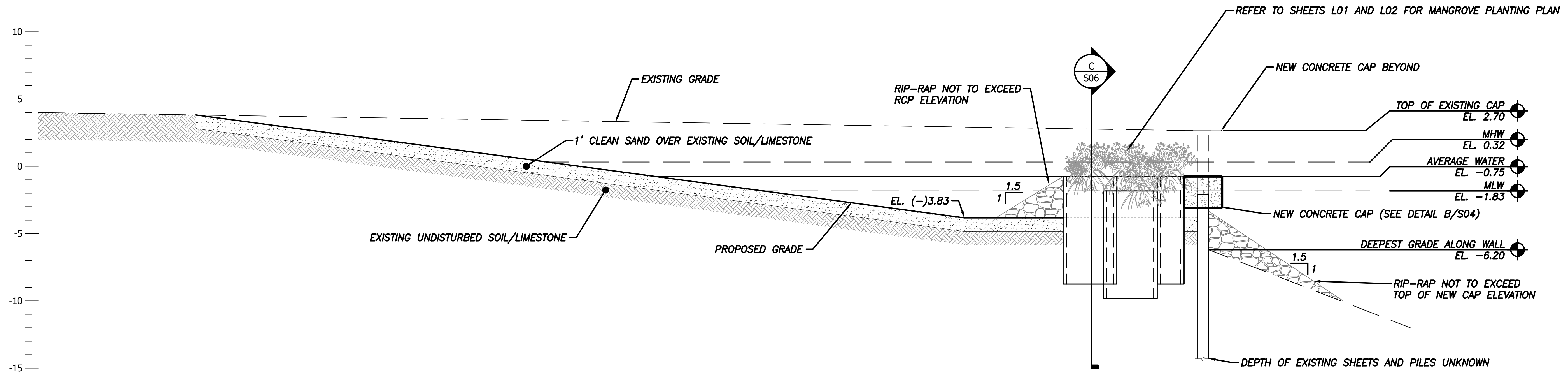
| NO. | DATE | BY | CHK'D | DESCRIPTION |
|-----|------------|--------|--------|---------------------|
| 1 | 08/30/2018 | D.A.M. | J.R.B. | FTL. BLDG. COMMENTS |

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
TRANSVERSE SECTION - THROAT
1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| S04 | 7 |
| TOTAL: | 17 |
| CAD FILE: | 12201-S04-SECT |
| DRAWING FILE NO. | 4-140-45 |

WGI
ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

BID SET



B
S05
TRANSVERSE SECTION - MANGROVE
4 2 0 4
GRAPHIC SCALE IN FEET

NOTE:

1. RCP "PLANTERS" TO BE PLACED AND EXCAVATION OF "BEACH" AREA TO BE SUBSTANTIALLY CONSTRUCTED PRIOR TO SEAWALL REMOVAL.
2. TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
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4. EXISTING SEAWALL LENGTH IS ±211.75'. PROPOSED MODIFICATIONS TO THE SEAWALL EFFECT 105' WHICH REPRESENTS APPROXIMATELY 49% OF THE OVERALL SEAWALL LENGTH.

SURVEY NOTES:

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2. CONTOURS SHOWN ARE FINISH GRADES. THESE INCLUDE 1' OF SAND FILL TO BE PLACED WITHIN THE CANOE/KAYAK LANDING AREA.

ENGINEER:
JEFFREY R. BERGMANN
DATE: NOV 19 2019
DATE PLOT:

DATE: 12-14-18
DRAWN BY: D.A.M.
DESIGNED BY: SCALE: AS SHOWN
CHECKED BY: J.R.B. C.B.L.
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | REVISIONS | | DESCRIPTION |
|-----|------------|--------|-----------|------------|-------------|
| | | | CHK'D | DATE | |
| 1 | 08/30/2018 | D.A.M. | J.R.B. | FTL. BLDG. | COMMENTS |
| | | | | | |
| | | | | | |

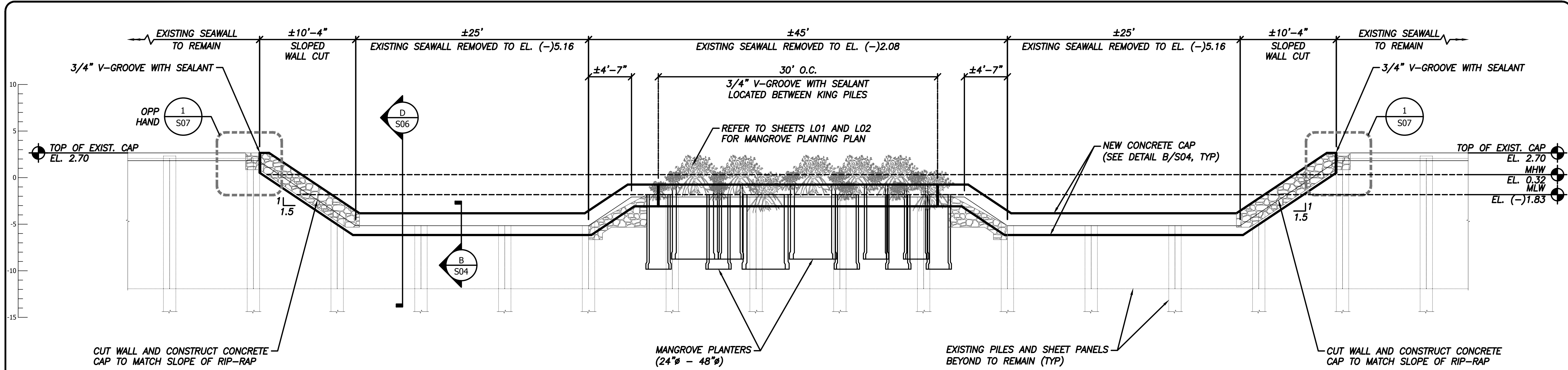
PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
TRANSVERSE SECTION - MANGROVE
1116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| S05 | 7 |
| TOTAL: | 17 |
| CAD FILE: | 12201-S05-SECT |
| DRAWING FILE NO. | 4-140-45 |

WGI
ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

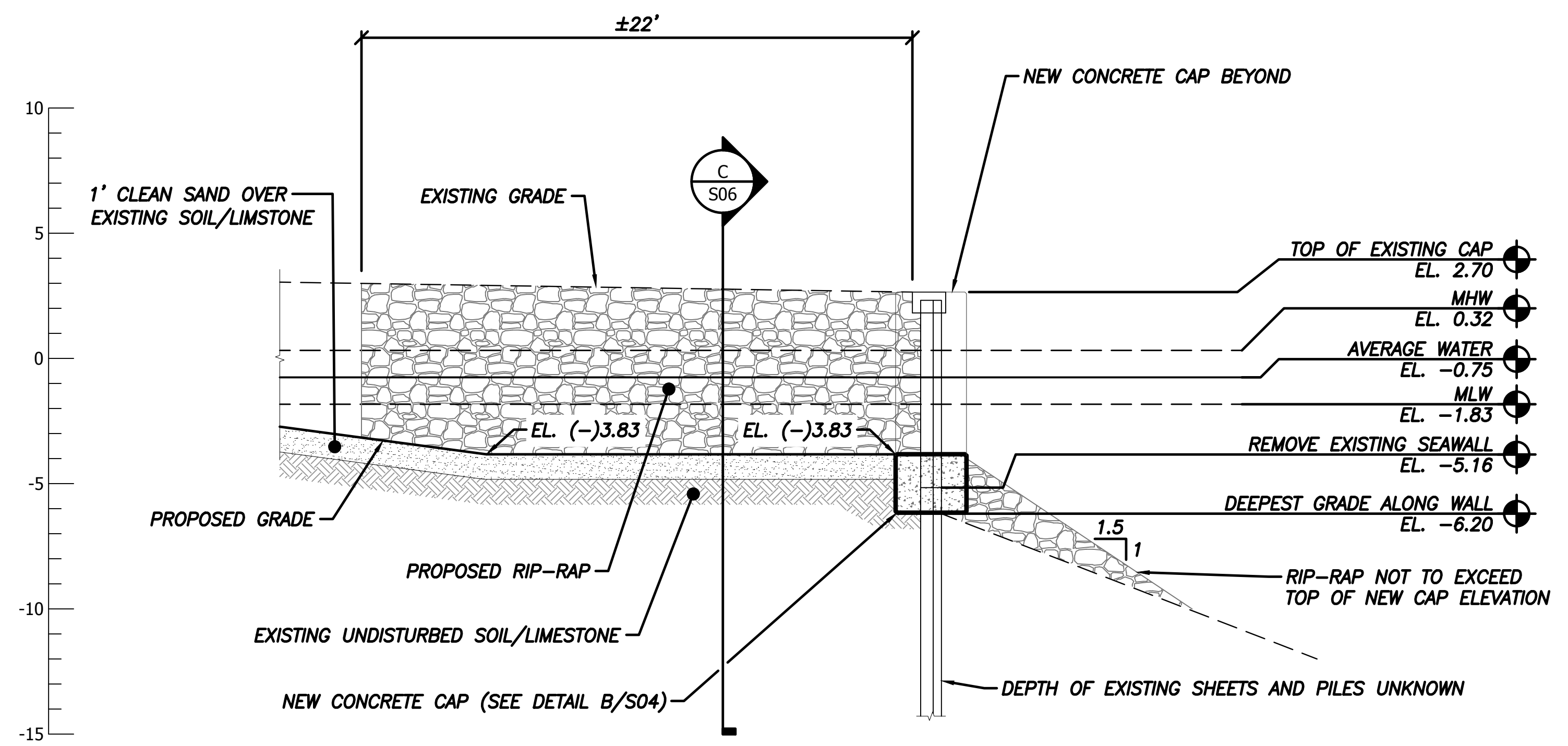
2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

BID SET



C LONGITUDINAL SECTION - MANGROVE
S06
5 2.5 0 5
GRAPHIC SCALE IN FEET

NOTE:
SAND FILL AND FINISH GRADE NOT SHOWN FOR CLARITY.



D TRANSVERSE SECTION
S06
4 2 0 4
GRAPHIC SCALE IN FEET

- NOTE:**
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 - TEMPORARY SHEET PILE FOR REMOVAL OF EXISTING CAP, WALL AND PILES AND CASTING OF NEW CONCRETE CAP WILL BE REQUIRED.
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 - CONTOURS SHOWN ARE FINISH GRADES. THESE INCLUDE 1' OF SAND FILL TO BE PLACED WITHIN THE CANOE/KAYAK LANDING AREA.

ENGINEER: JEFFREY R. BERGMANN
DATE: NOV 01 09
DATE PLOT: 11/17/2019

DRAWN BY: DATE: 12-14-18
D.A.M.
DESIGNED BY: SCALE: AS SHOWN
J.R.B.
CHECKED BY: C.B.L.
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CHK'D | DESCRIPTION |
|-----|------------|--------|--------|--------------------|
| 1 | 08/30/2018 | D.A.M. | J.R.B. | FT. BLDG. COMMENTS |

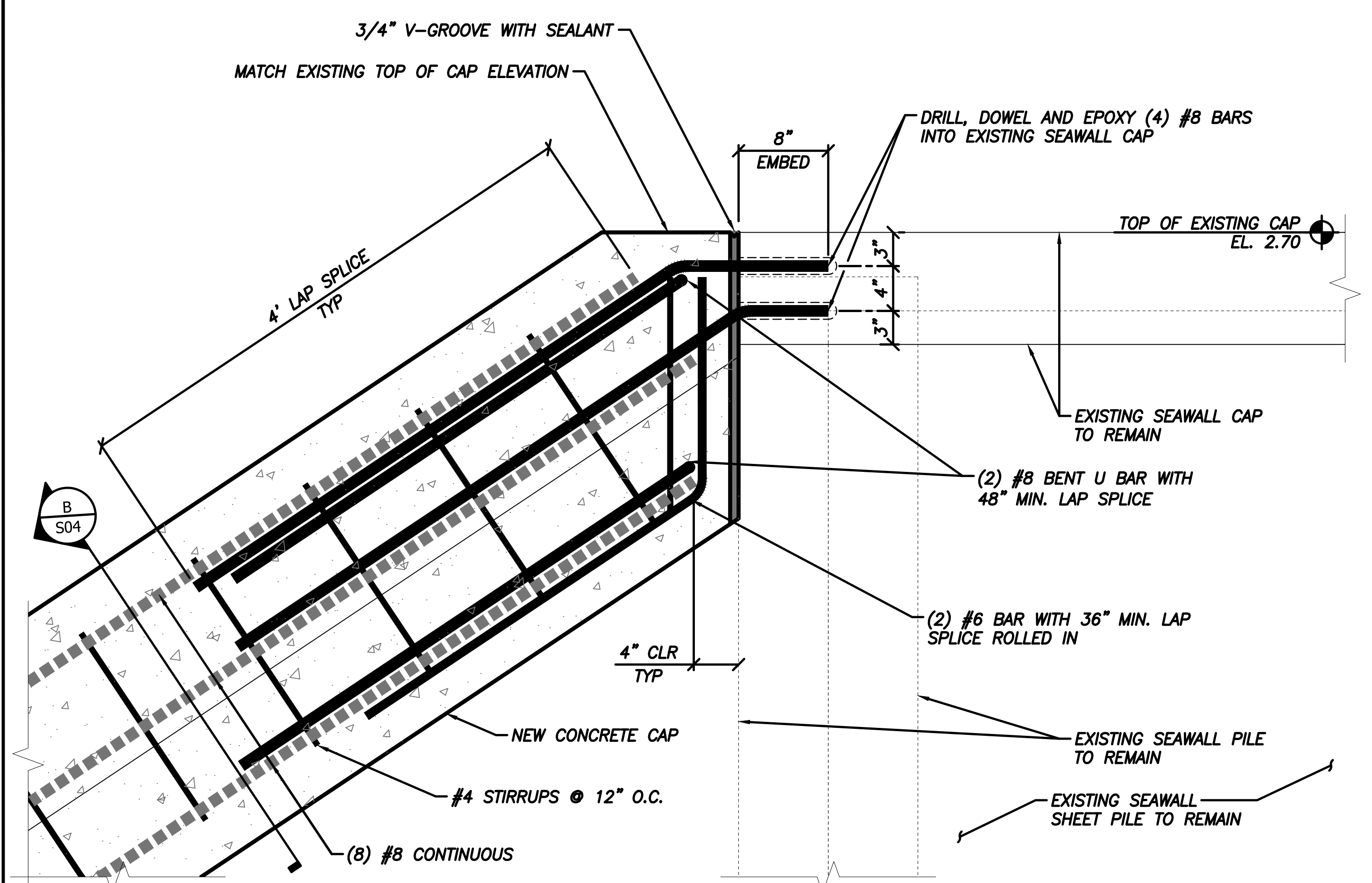
PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
LONGITUDINAL SECTION - MANGROVE
11116 SW 15th AVENUE

| | |
|------------------|----------------|
| SHEET NO. | OF |
| S06 | 7 |
| TOTAL: | 17 |
| CAD FILE: | 12201-S06-SECT |
| DRAWING FILE NO. | 4-140-45 |

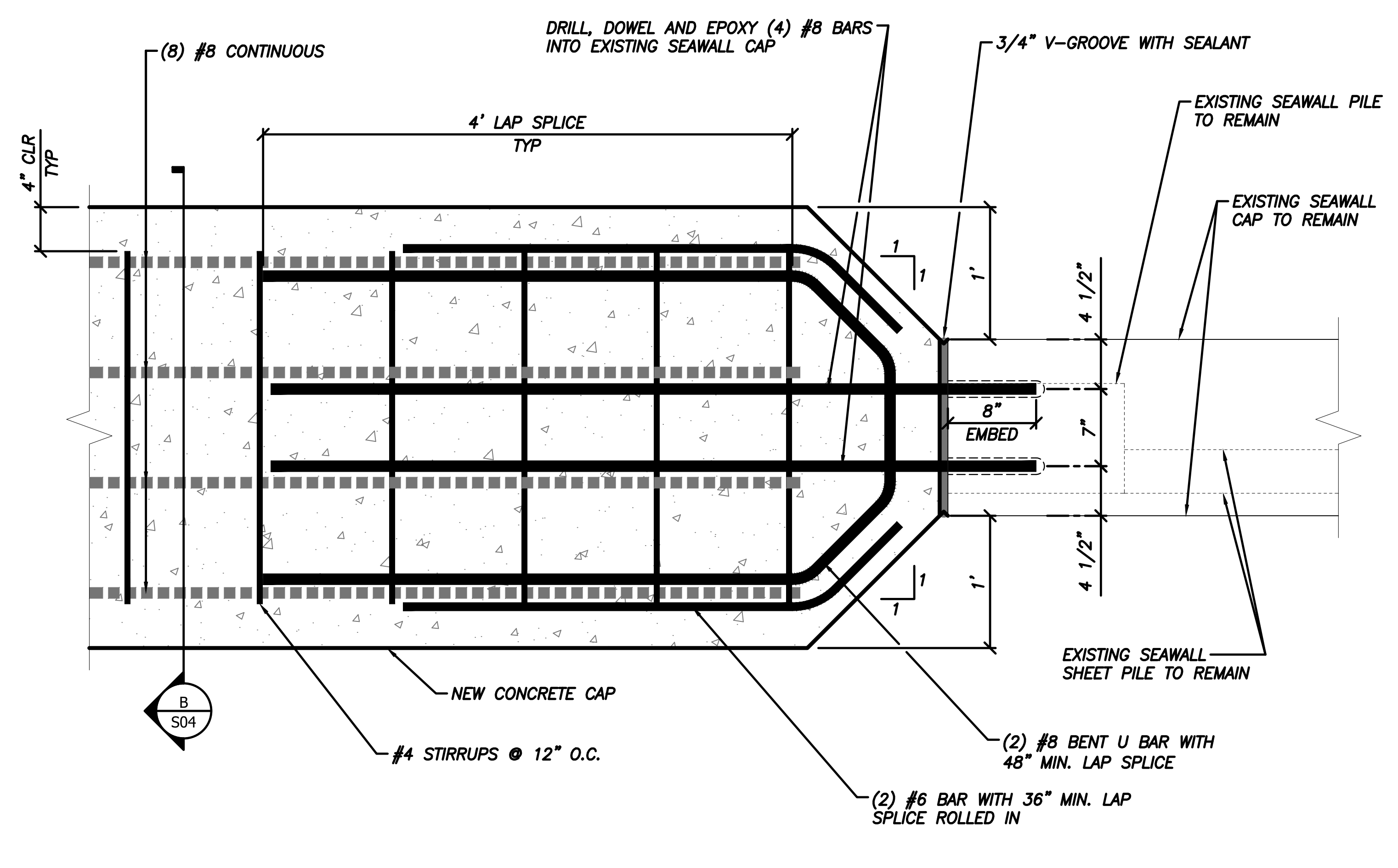
WGI
ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

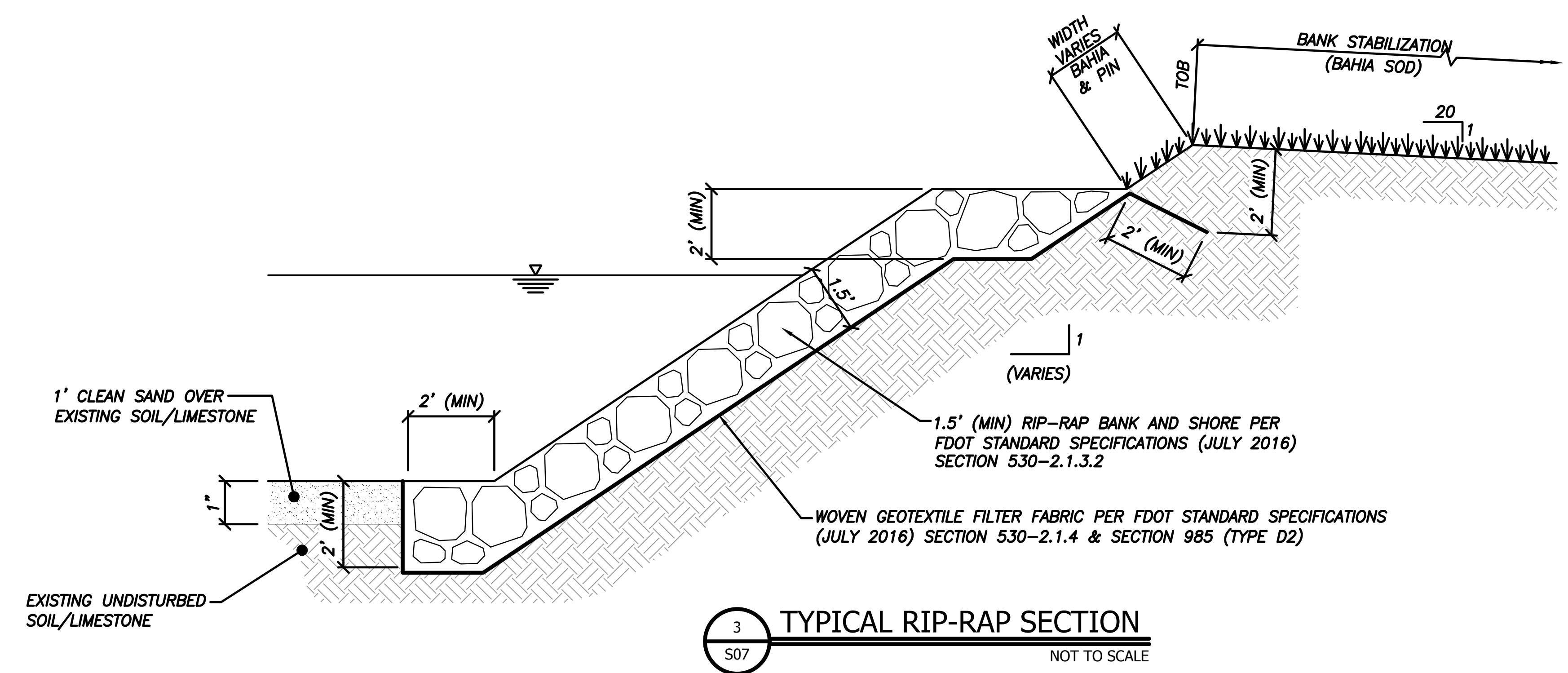
BID SET



1 CAP TIE IN DETAIL - ELEVATION
S07
GRAPHIC SCALE IN FEET



2 CAP TIE IN DETAIL - PLAN
S07
GRAPHIC SCALE IN FEET



3 TYPICAL RIP-RAP SECTION
S07
NOT TO SCALE

NOTE:

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ENGINEER: JEFFREY R. BERGMANN
DATE: NOV 19 2019
DATE PLOTTED: 11/19/2019

DRAWN BY: D.A.M.
DESIGNED BY: J.R.B.
CHECKED BY: C.B.L.
SCALE: AS SHOWN
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

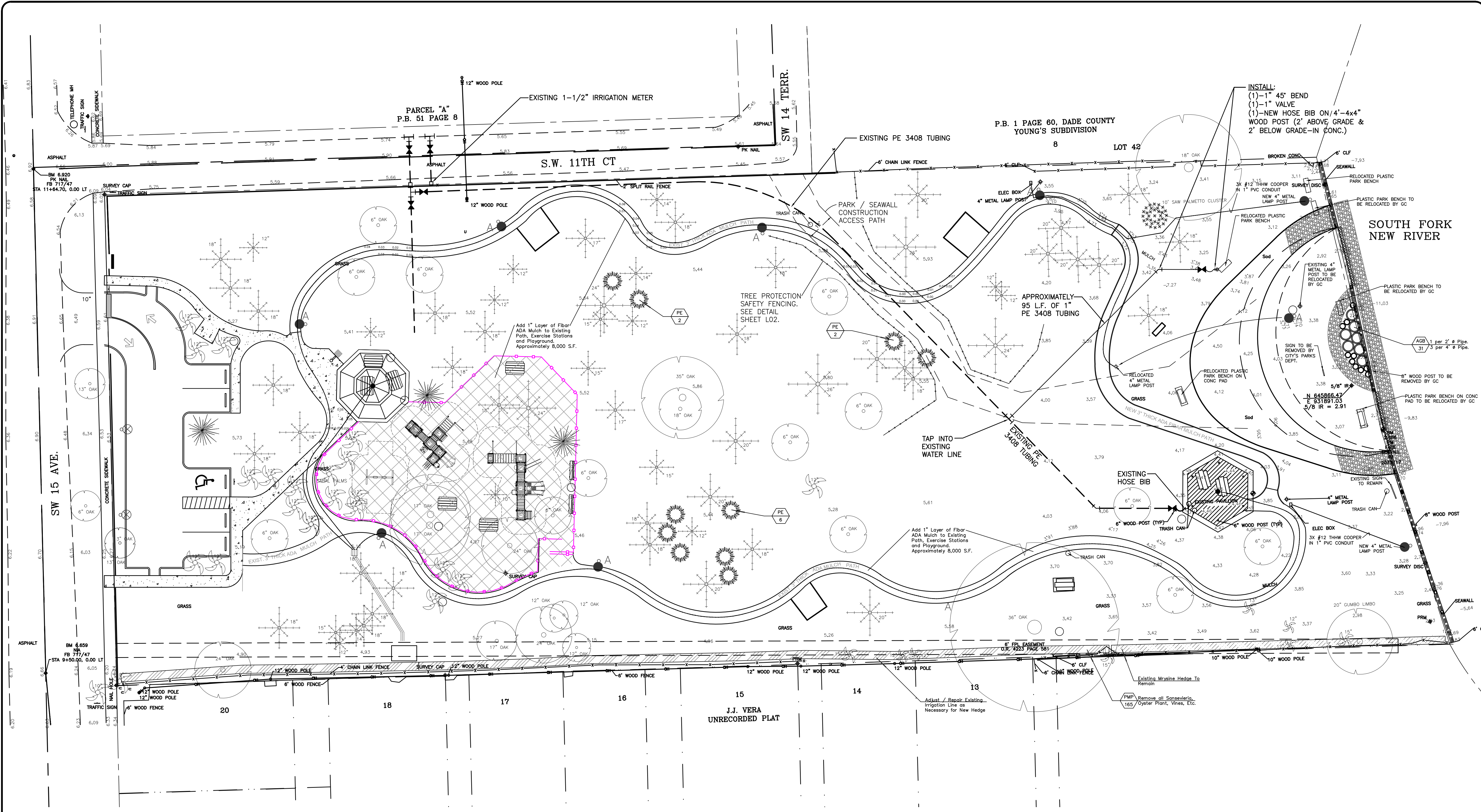
| NO. | DATE | BY | DESCRIPTION |
|-----|------------|--------|--------------------|
| 1 | 08/30/2018 | D.A.M. | FTL BLDG. COMMENTS |

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
MISCELLANEOUS DETAILS
11116 SW 15th AVENUE


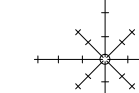

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|------------------|----------------|
| SHEET NO. | OF |
| S07 | 7 |
| TOTAL: | 17 |
| CAD FILE: | 12201-S07-DETL |
| DRAWING FILE NO. | 4-140-45 |

WGI
ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING
WGI PROJECT NO. 08162059.01

BID SET



EXISTING TREE LEGEND

-  Live Oaks
-  Slash Pines
-  Sabal Palms

LIGHTING SPECIFICATIONS

| Qty | Type | Description |
|-----|------|---|
| 2 | AMRO | MER06SPL medium embedded round pole, 16'-0" above grade, 8'-7" embedment. |
| | AMRO | (6P3) Black Pebblestone Exposed finish, with Amershiel coating. |
| | AMRO | (CAST), ALUMINUM-DOME Pole Top Cap for 130mm top ROUND Pole Painted |
| | AMRO | PA Semi-Gloss Black, Top Collar, Painted PA Semi Gloss Black |
| 2 | SESC | FCL-LINCOMP |
| 2 | LUMC | DMS50-100HPS-SG3-QTA/120-MA1-SLPC-BKTX |

NOTE: 8 Week Lead Time

COONTIE HATCHEE PLANT LIST

| Code | Drought | Qty. | Botanical Name / Common Name | Specifications |
|--------------------------|---------|-----------|--|---|
| PROPOSED TREES | | | | |
| PE | (N) | V | 10 Pinus elliottii / Slash Pine | 10' Ht. x 3-4" Spr., 1.5" Cal. DBH, single main leader. |
| PROPOSED SHRUBS | | | | |
| PMP | (N) | V | 165 Podocarpus macrophyllus / Podocarpus | 3 Gal., 30" OA, 30" OC |
| PROPOSED MANGROVE | | | | |
| PMP | (N) | V | 31 Avicennia germinans / Black Mangrove | 1 Gal., 18" OA, 24" OC |
| MISCELLANEOUS | | | | |
| Fibr | Approx. | 8000 s.f. | Fibr ADA Mulch | 1" Layer over existing mulch path and playground |
| Fibr | Approx. | 1000 s.f. | Fibr ADA Mulch | 3" Thick-new mulch path |
| Sod | M | | Stenotaphrum secundatum / St. Augustine 'Palmetto' | Replacement areas as needed |
| | (N) | | Florida Native Plant Species | |
| | V | | Very Drought Tolerant | |
| | M | | Medium Drought Tolerant | |

LANDSCAPE ARCHITECT
 THOMAS WHITE, A.S.L.A.
 REG. NO. 1100
 DATE:

DRAWN BY: DATE: 12/14/2018
 DESIGNED BY: SCALE: TW
 CHECKED BY: IT
 FIELD BOOK: 33301

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | DATE | BY | CR'D | DESCRIPTION |
|-----|------|----|------|-------------|
| | | | | |
| | | | | |
| | | | | |

PROJECT # 12201
 COONTIE HATCHEE PARK
 CANOE/KAYAK LAUNCH
 OVERALL SITE IMPROVEMENTS
 1116 SW 15th AVENUE

SHEET NO. OF
L01 2
 TOTAL: 17
 CAD FILE: 12201-MULTI-LAND
 DRAWING FILE NO. 4-140-45

BID SET

GENERAL PLANTING REQUIREMENTS

The plan takes precedence over the plant list.

2 Full business days before digging, call toll free 1-800-432-4770 Sunshine State One Call of Florida, Inc. Notification Center. For City of Fort Lauderdale Utilities call 1-954-628-8000. Contractors are responsible for coordinating with the owners and appropriate public agencies to assist in locating and verifying all underground utilities prior to excavation. All existing utilities shown on the plans are to be considered approximate and should be verified by the contractor prior to the start of work operations.

General site and berm grading to +/- 1 inch (1") shall be provided by the general contractor. All finished site grading and final decorative berm shaping shall be provided by the landscape contractor.

All sizes shown for plant material on the plans are to be considered Minimum. All plant material must meet or exceed these minimum requirements for both height and spread. Any other requirements for specific shape or effect as noted on the plan(s) will also be required for final acceptance.

All plant material furnished by the landscape contractor shall be Florida #1 or better as established by Grades and Standards for Florida Nursery Trees and Plants.

All trees designated as single trunk shall have a single, relatively straight, dominant leader, proper structural branching and even branch distribution. Trees with bark inclusion, tipped branches, and co-dominant trunks will not be accepted. Trees with girdling, circling and/or plunging roots will be rejected.

All planting beds shall be free of all rocks 1/2" or larger, sticks, and objectionable material including weeds, weed seeds. All limerock shall be removed/cleaned down to the native soils. Planting soil 50/50 sand/topsoil mix shall be delivered to the site in a clean loose and friable condition and is required around the root ball of all trees and palms, the top 6" of all shrubs and ground cover beds. This soil can be tilled into the existing soil after the existing soil has been cleaned of all rocks, limestone and sticks. Recycled compost is encouraged as a soil amendment alternative. Sod 1.5-2" topsoil comes furnished.

All burlap, string, cords, wire baskets, plastic or metal containers shall be removed from the rootballs before planting. Remove all bamboo and metal nursery stakes. Remove all tagging tape.

All trees/palms shall be planted so the top of the root ball, root flare are slightly above final grade. Shrub material shall be planted such that the top of the plant ball is flush with the surrounding grade. It is the sole responsibility of the landscape contractor to insure that all new plantings receive adequate water during the installation and during all plant warranty periods. Deep watering of all new trees and palms and any supplemental watering that may be required to augment natural rainfall and site irrigation is mandatory to insure proper plant development and shall be provided as a part of this contract.

All trees/palms shall be staked using biodegradable material. No wire, black strapping, or other synthetic material shall be used. Nailing into trees and palms for any reason is prohibited and the material will be rejected. Please refer to the planting details.

All landscape and lawn areas shall be irrigated by a fully automatic sprinkler system with a minimum 100% coverage with all heads adjusted to 50% overlap. Each system shall be installed with an operational rain sensor and rust inhibitor.

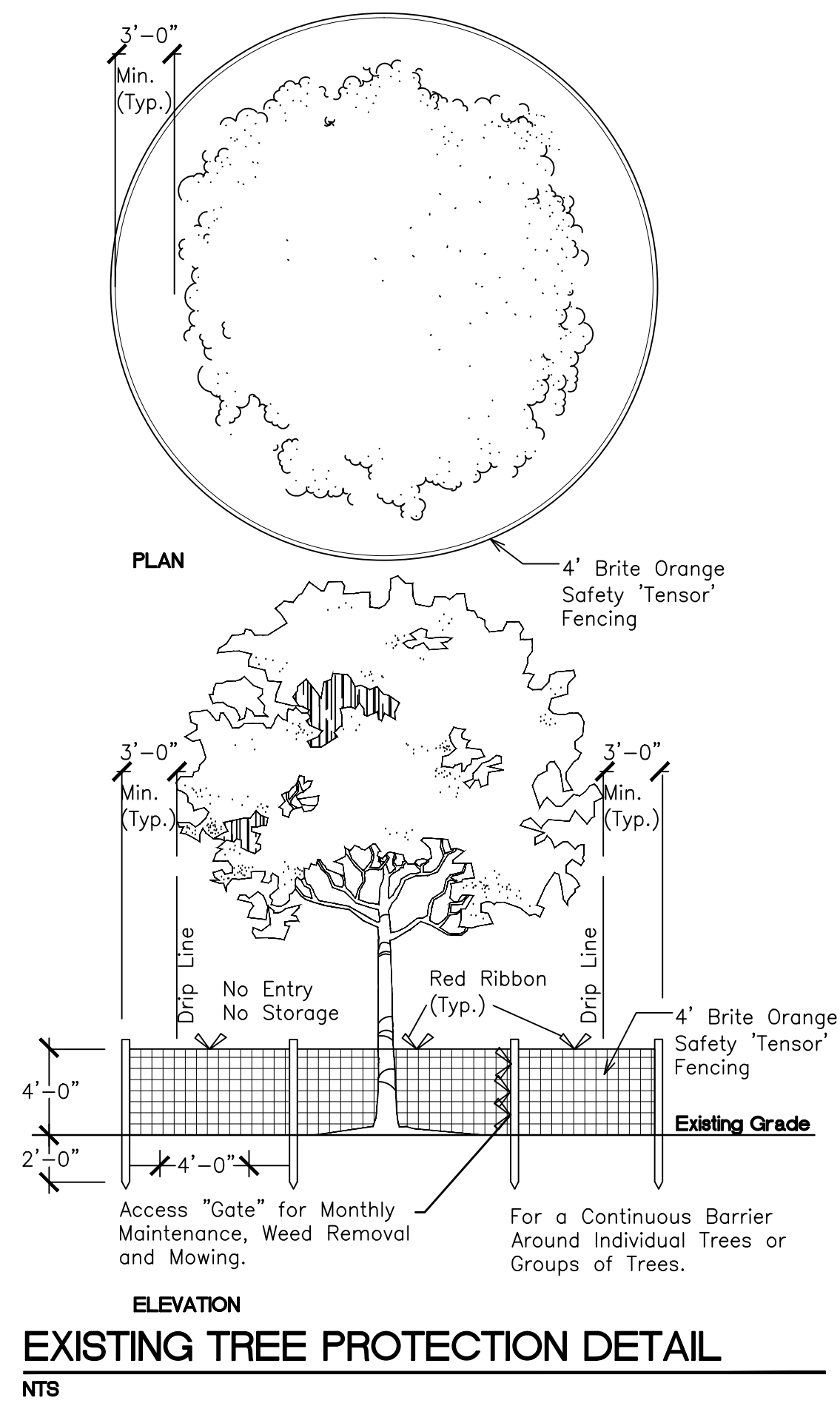
No fertilizers are required.

All landscape areas shall be covered with Pine Straw, Pine Bark, Eucalyptus or sterilized seed free Melaleuca mulch to a minimum depth of three inches (3") of cover when settled. Spread mulch to 1" thickness 3' away from the trunks/stems of all plant material. All trees in sodded areas shall have a clean cut 4' diameter mulch ring. The 5-6" height water ring shall be made from mulch, not soil. Certain areas may receive a thicker mulch cover where noted on plans. Cypress, red, gold and green mulch is prohibited.

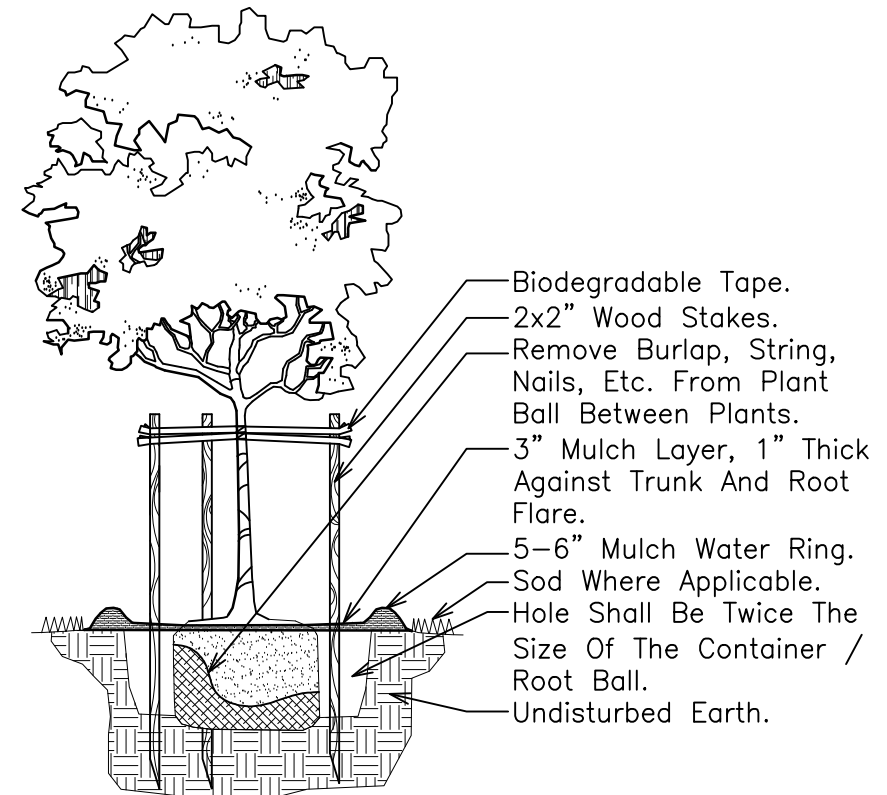
All open areas not covered by trees, palms, shrubs, vines or ground covers shall receive Stenotaphrum secundatum, St. Augustine 'Palmetto' sod, whether labeled on the plans or not, unless a different species is indicated on the planting plan. All noted s.f. shall be approximate; it is the contractor's responsibility to do his or her take off and sod all open areas. It shall be the responsibility of the contractor to include in the bid, the repair of any existing sod which may be damaged during construction.

Please refer to the planting details for a graphic representation of the above notes.

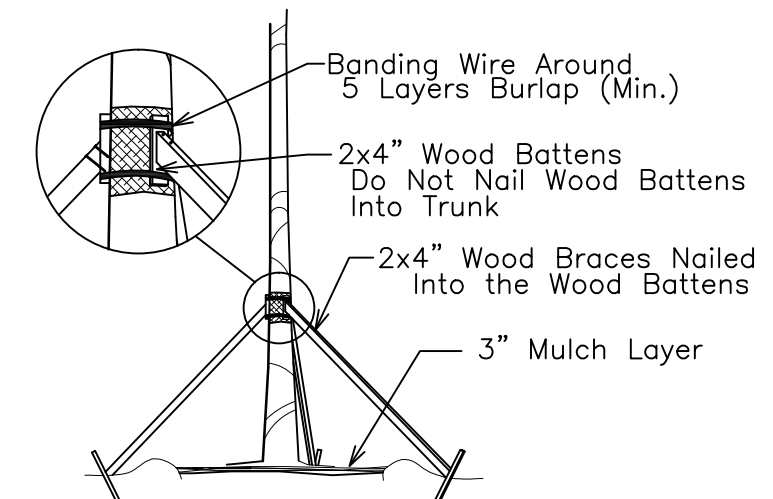
All plant material as included herein shall be warranted by the landscape contractor for a minimum period as follows: All trees and palms for 12 months, all shrubs, vines, groundcovers and miscellaneous planting materials for 90 days, and all lawn areas for 60 days after final acceptance by the owner or owner's representative.



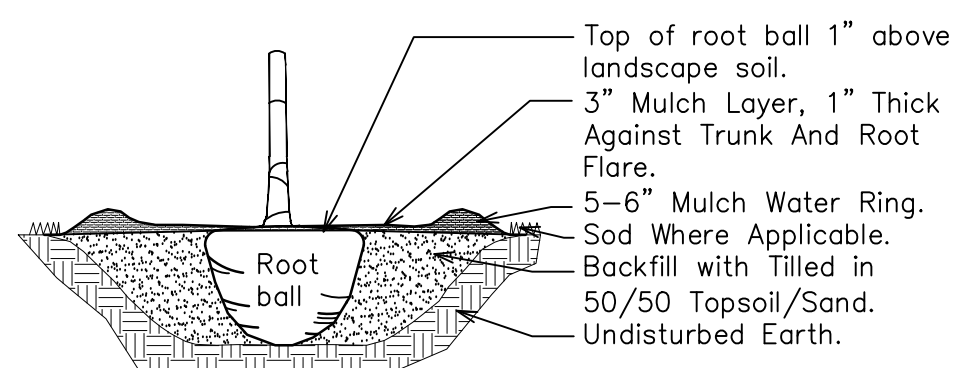
EXISTING TREE PROTECTION DETAIL
NTS



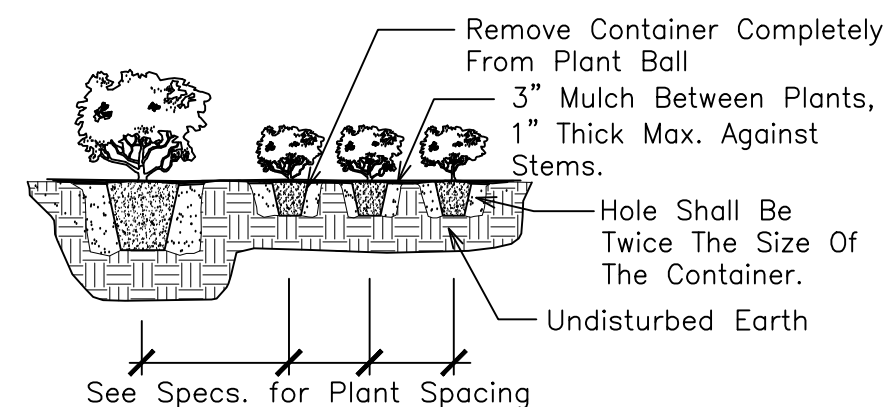
SMALL TREE PLANTING DETAIL
NTS



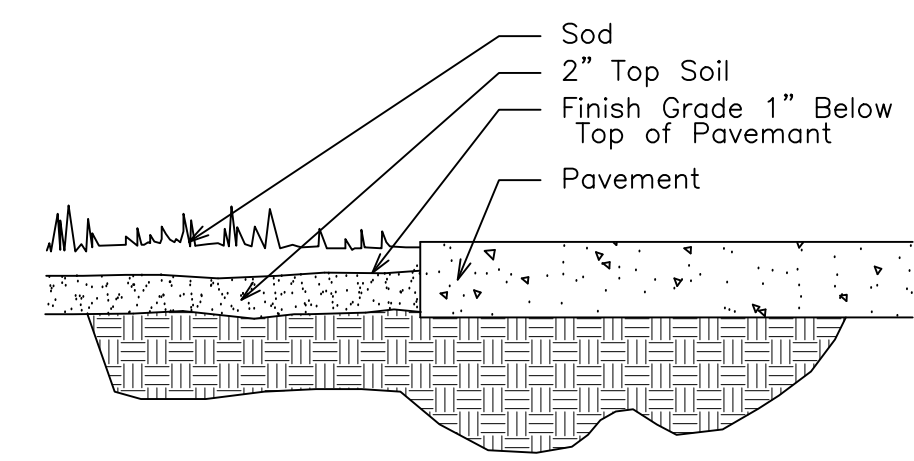
TREE/PALM BRACING DETAIL
NTS



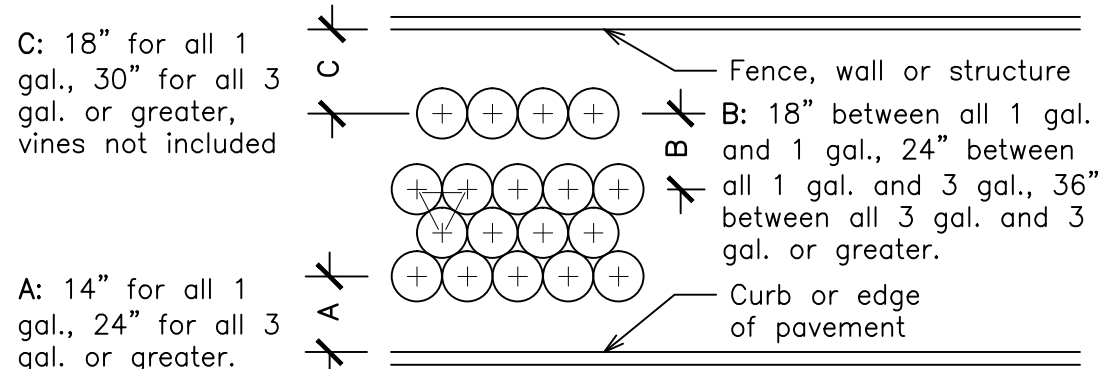
TREE/PALM PLANTING DETAIL
NTS



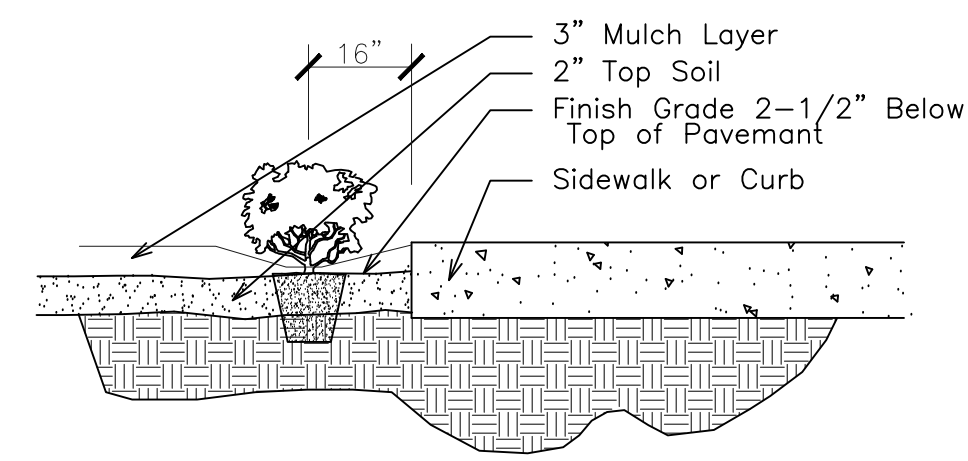
SHRUB PLANTING DETAIL
NTS



SOD INSTALLATION DETAIL
NTS



TYPICAL PLANT SPACING DETAIL
NTS



SHRUB INSTALLATION DETAIL
NTS

ARCHITECTS
THOMAS H. HYTE, A.S.L.A.
REG. NO. 1110
DATE:

DATE: 12/14/2018
DRAWN BY: TW
DESIGNED BY: SCALE: 1" = 20'
CHECKED BY: IT
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

| NO. | REVISIONS | | DESCRIPTION |
|-----|-----------|----|-------------|
| | DATE | BY | |
| | | | |
| | | | |
| | | | |

PROJECT # 12201
COONTIE HATCHEE PARK
CANOE/KAYAK LAUNCH
LANDSCAPE DETAILS/NOTES
1116 SW 15th AVENUE

SHEET NO. OF
L02 2
TOTAL: 17
CAD FILE: 12201-L02-DET
DRAWING FILE NO. 4-140-45

BID SET

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

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- 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

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- How are subcontractors notified of available opportunities with your firm?

5

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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 |

| |
|---|
| 5 |
| 6 |

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.

QUESTIONNAIRE SHEET

PLEASE PRINT OR TYPE:

Firm Name:

President

Business Address:

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Telephone:

Fax:

E-Mail Address:

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

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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, telephone numbers and e-mail addresses). Include the project name, year, description, and contract value.

How many years has your organization been in business?

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

The name of the qualifying agent for the firm and his position is:

Certificate of Competency Number of Qualifying Agent:

Effective Date: Expiration Date:

Licensed in: Engineering Contractor's License #

(County/State)

Expiration Date:

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

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

QUESTIONNAIRE SHEET

1. Have you personally inspected the proposed work and have you a complete plan for its performance?

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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?

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5. What equipment will you rent for the proposed work?

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BID NO. 12231-293 / PROJECT NO. 12261 SPECIFIC REFERENCES FORM

The contractor shall have at least five (5) years previous construction experience in constructing additions/modifications to existing public buildings in the State of Florida. Bidder shall submit proof of construction experience for a minimum of three (3) projects of similar scope and scale (or larger). **Bidder's are expected to provide information on each project by including these forms in their bid submittals.** If these forms are not utilized, the Bidder's must provide identical information to the City for evaluation purposes.

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

A. PRIME BIDDER'S NAME:

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

Address:

Contact Person:

Phone No:

Contact E-Mail Address:

Project Performance Period: to

Dates should be in mm/yy format

Project Name :

Location of Project:

Overall Construction Cost:

Description of the overall scope:

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Description of work that was self-performed by Bidder:

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