Solicitation 12248-193

Sistrunk Off-Street Parking Lot at NW 12th Avenue P12166.347

Bid Designation: Public



City of Fort Lauderdale

Bid 12248-193 Sistrunk Off-Street Parking Lot at NW 12th Avenue P12166.347

Bid Number 12248 - 193

Bid Title Sistrunk Off-Street Parking Lot at NW 12th Avenue P12166.347

Bid Start Date Feb 4, 2019 2:08:21 PM EST
Bid End Date Mar 4, 2019 2:00:00 PM EST

Question & Answer

End Date

Feb 22, 2019 5:00:00 PM EST

Bid Contact Fausto Vargas

Procurement Specialist

Finance - Procurement Division fvargas@fortlauderdale.gov

Contract Duration One Time Purchase

Contract Renewal Not Applicable

Prices Good for 120 days

Pre-Bid Conference Feb 15, 2019 11:00:00 AM EST

Attendance is optional

Location: 914 Sistrunk Boulevard

Fort Lauderdale Fl. 33311

Community Redevelopment Agency

Bid Comments

INVITATION TO BID

Sealed bids will be received electronically until 2:00 P.M., local time, on Monday, March 4th, 2019, and opened immediately thereafter in the 5th Floor Conference Room, City Hall, City of Fort Lauderdale, Florida, 100 North Andrews Avenue, for BID NO., 12248-193, PROJECT NO.,12166.347 Sistrunk Off-Street Parking Lot at NW 12th Avenue.

This project consists of Drawing File No. 4-141-34 (22) sheets.

This project is located at southeast corner of Sistrunk Boulevard and NW 12th Avenue, in the City of Fort Lauderdale. The work to be accomplished under this contract includes, but is not limited to; construct a new public parking lot.

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

<u>Licensing Requirements</u>: Contractor certified by State of Florida to perform the work specified in the scope. Must possess State of Florida General Contractor's License.

<u>Pre-Bid Meeting/Site visit:</u> A pre-bid meeting and/or site visit will be held on Friday, February 15th, 2019, at 11:00 a.m., local time, at 914 Sistrunk Boulevard, Suite 200, Fort Lauderdale, FL 33311 (Community Redevelopment Agency).

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

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

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

For information concerning technical specifications, please utilize the question/answer feature provided by BIDSYNC at www.bidsync.com. 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	12248-19301-01 - Base Bid 1: Mobilization
Lot Description	Base Bid 1
Quantity	1 each
Unit Price	
Delivery Location	City of Fort Lauderdale
	See ITB Specifications
	See ITB Specifications
	Fort Lauderdale FL 33301
	Qty 1

Description

Mobilization

Item 12248-193--02-01 - Base Bid 2: Maintenance of Traffic

Lot Description Base Bid 2

Quantity 1 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1

Description

Bid Item 2 is a lump sum pay item for a Maintenance of Traffic and includes all pedestrian access maintenance. All crosswalks and sidewalks shall remain open and free of obstructions. Temporary painting for roadways and rosswalks shall be maintained throughout the project. Costs shall include the use of flagmen.

Item 12248-193--03-01 - Base Bid 3: Clearing and Grubbing

Lot Description Base Bid 3

Quantity 1 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1

Description

Bid Item 3 is a lump sum pay item that includes the removal and disposal of all existing concrete curbing and sidewalk, soil/planting, trees, stumps, roots and other such protruding objects, buildings, structures, appurtenances, existing flexible asphalt pavement, base

material, and other facilities necessary to prepare the area for the proposed construction and which are not included as part of another bid item.

Item 12248-193--04-01 - Base Bid 4: Surveying and Testing

Lot Description Base Bid 4
Quantity 1 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1

Description

Bid Item 4 is a lump sum pay item that includes all required Surveying and Testing throughout the project

Item 12248-193--05-01 - Base Bid 5: 1-1/2 Type S-III Asphalt Pavement

Lot Description Base Bid 5
Quantity 1000 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1000

Description

Bid items 5, 6, 7, and 8 include all costs associated with installing the full asphalt pavement section

Item 12248-193--06-01 - Base Bid 6: 8 Limestone Rock Base

Lot Description Base Bid 6

Quantity 1000 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1000

Description

Bid items 5, 6, 7, and 8 include all costs associated with installing the full asphalt pavement section

Item 12248-193--07-01 - Base Bid 7: 12 Stabilizing Subgrade

Lot Description Base Bid 7
Quantity 1000 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications

See ITB Specifications Fort Lauderdale FL 33301 Qty 1000

Description

Bid items 5, 6, 7, and 8 include all costs associated with installing the full asphalt pavement section

Item 12248-193--08-01 - Base Bid 8: Streetbond Coating

Lot Description Base Bid 8

Quantity 9000 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 9000

Description

Bid items 5, 6, 7, and 8 include all costs associated with installing the full asphalt pavement section

Item 12248-193--09-01 - Base Bid 9: 6 Concrete Sidewalk

Lot Description Base Bid 9
Quantity 600 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 600

Description

Bid Item 9 includes all costs associated with installing concrete sidewalk. The costs include installation of concrete, all associated excavation, management of excavated materials, new limerock and sub base as needed, backfill and compaction, testing, and site restoration.

Item 12248-193--10-01 - Base Bid 10: 4X6 Exfiltration Trench w/ 18 Slotted Pipe

Lot Description Base Bid 10

Quantity 42 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 42

Description

Bid Items 10, 11, and 12 includes all costs associated with installing inlets, manholes, and control structures, exfiltration trench, replacing existing inlet grates, modifying/core drilling existing inlets, and all drainage pipe connections per the plans. These Bid Items shall include all associated excavation, protection of trench, management of excavated material, backfill and compaction, new fill, and testing, and site restoration per the plans and details.

Item 12248-193--11-01 - Base Bid 11: Catch Basin w/ Inlet Top & Grate
Lot Description Base Bid 11

Quantity 1 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1

Description

Bid Items 10, 11, and 12 includes all costs associated with installing inlets, manholes, and control structures, exfiltration trench, replacing existing inlet grates, modifying/core drilling existing inlets, and all drainage pipe connections per the plans. These Bid Items shall include all associated excavation, protection of trench, management of excavated material, backfill and compaction, new fill, and testing, and site restoration per the plans and details.

ltem 12248-193--12-01 - Base Bid 12: HDPE Pipe (18 Pipe)

Lot Description Base Bid 12

Quantity 10 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 10

Description

Bid Items 10, 11, and 12 includes all costs associated with installing inlets, manholes, and control structures, exfiltration trench, replacing existing inlet grates, modifying/core drilling existing inlets, and all drainage pipe connections per the plans. These Bid Items shall include all associated excavation, protection of trench, management of excavated material, backfill and compaction, new fill, and testing, and site restoration per the plans and details.

Item 12248-193--13-01 - Base Bid 13: Concrete Curb (Type D)

Lot Description Base Bid 13

Quantity 90 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 90

Description

Bid Items 13 and 14 include all costs associated with installing concrete curb and ADA curb ramps. The costs include installation of curbing, installation of curb ramps, all associated excavation, management of excavated materials, new limerock and sub base as needed, backfill and compaction, testing, and site restoration.

ltem 12248-193--14-01 - Base Bid 14: Type CR-E ADA curb ramp

Lot Description Base Bid 14

Quantity 4 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 4

Description

Bid Items 13 and 14 include all costs associated with installing concrete curb and ADA curb ramps. The costs include installation of curbing, installation of curb ramps, all associated excavation, management of excavated materials, new limerock and sub base as needed, backfill and compaction, testing, and site restoration.

Item 12248-193--15-01 - Base Bid 15: Reflective Pavement Marker (RPM)

Lot Description Base Bid 15

Quantity 4 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 4

Description

Bid Items 15, 16, 17, 18, 19, and 20 include all costs associated with installing reflective pavement markings, striping, and signage.

Item 12248-193--16-01 - Base Bid 16: 24 White Thermoplastic Striping

Lot Description Base Bid 16

Quantity 10 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 10

Description

Bid Items 15, 16, 17, 18, 19, and 20 include all costs associated with installing reflective pavement markings, striping, and signage.

Item 12248-193--17-01 - Base Bid 17: 6 Double Yellow Thermoplastic Striping

Lot Description Base Bid 17

Quantity 25 each

Delivery Location

Unit Price

City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 25

Description

Bid Items 15, 16, 17, 18, 19, and 20 include all costs associated with installing reflective pavement markings, striping, and signage.

Item 12248-193--18-01 - Base Bid 18: 4 White Thermoplastic Striping Lot Description Base Bid 18 Quantity 500 each **Unit Price Delivery Location** City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 **Qty** 500 Description Bid Items 15, 16, 17, 18, 19, and 20 include all costs associated with installing reflective pavement markings, striping, and signage. 12248-193--19-01 - Base Bid 19: Signage (Motorcycle, Handicap, Stop Signs) Item Lot Description Base Bid 19 2 each Quantity **Unit Price Delivery Location** City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 2 Description Bid Items 15, 16, 17, 18, 19, and 20 include all costs associated with installing reflective pavement markings, striping, and signage. Item 12248-193--20-01 - Base Bid 20: Pavement Marking (Handicap & Arrow Markings) Base Bid 20 Lot Description 3 each Quantity **Unit Price Delivery Location** City of Fort Lauderdale See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301 Qty 3 Description Bid Items 15, 16, 17, 18, 19, and 20 include all costs associated with installing reflective pavement markings, striping, and signage. 12248-193--21-01 - Base Bid 21: vShine Street LED Solar Light and Pole Item Lot Description Base Bid 21 Quantity 8 each **Unit Price Delivery Location**

City of Fort Lauderdale

See ITB Specifications See ITB Specifications Fort Lauderdale FL 33301

Qty 8

Description

Bid Item 21 includes all costs associated with the installation of street lights and poles. These costs shall include all associated excavation, management of excavated material, foundations, testing, and site restoration per the plans and details.

Item 12248-193--22-01 - Base Bid 22: Bike Rack

Lot Description Base Bid 22

Quantity 1 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1

Description

Bid Item 22 includes all costs associated with the installation of bike racks.

Item 12248-193--23-01 - Base Bid 23: Detectable warning pad

Lot Description Base Bid 23

Quantity 8 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 8

Description

Bid Item 23 includes all costs associated with installing detectable warning pads. The costs include the sizing, installing, cleaning and final preparation of the detectable warning pads.

Item 12248-193--24-01 - Base Bid 24: Concrete Paver Sidewalk

Lot Description Base Bid 24
Quantity 50 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 50

Description

Bid Item 24 includes all costs associated with installing concrete paver sidewalk. The costs include installation of pavers, concrete, all associated excavation, management of excavated materials, new limerock and sub base as needed, backfill and compaction, testing, and site restoration.

Item 12248-193--25-01 - Base Bid 26: Silver Buttonwood - 2.5 Cal.

Lot Description Base Bid 26
Quantity 7 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 7

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

ltem 12248-193--26-01 - Base Bid 27: Crape Myrtle - 2.5 Cal. Multi

Lot Description Base Bid 27

Quantity 3 each

equality 5 cutoff

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 3

Description

Unit Price

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

Item 12248-193--27-01 - Base Bid 28: Simpson Stopper - 2.5 Cal. Multi.

Lot Description Base Bid 28

Quantity 4 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 4

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

Item 12248-193--28-01 - Base Bid 29: Southern Live Oak - 4 Cal.

Lot Description Base Bid 29

Quantity 6 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 6

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

ltem 12248-193--29-01 - Base Bid 30: Florida Thatch Palm - 8 O.A.

Lot Description Base Bid 30

Quantity 2 each

Unit Price

Delivery Location

City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 2

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

ltem 12248-193--30-01 - Base Bid 31: Red Tip Cocoplum - 24 x 24

Lot Description Base Bid 31
Quantity 132 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 132

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

ltem 12248-193--31-01 - Base Bid 32: Simpson Stopper - 24 x 24

Lot Description Base Bid 32

Quantity 35 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 35

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

Item 12248-193--32-01 - Base Bid 33: Bioswale Planting Mix

Lot Description Base Bid 33

Quantity 1279 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1279

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

ltem 12248-193--33-01 - Base Bid 34: Green Island Ficus - 15 x 15

Lot Description Base Bid 34
Quantity 174 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 174

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

Item 12248-193--34-01 - Base Bid 35: Argentine Bahia - Sod

Lot Description Base Bid 35
Quantity 1704 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 1704

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

ltem 12248-193--35-01 - Base Bid 36: Asiatic Jasmine - 15x15

Lot Description Base Bid 36
Quantity 30 each

Unit Price

Delivery Location City of Fort Lauderdale

See ITB Specifications
See ITB Specifications
Fort Lauderdale FL 33301

Qty 30

Description

Bid Items 26-36 include all costs associated with the installation of trees, shrubs, and other landscaping material.

CITY OF FORT LAUDERDALE CONTRACT AND SPECIFICATIONS PACKAGE

BID NO. 12248-193

PROJECT NO. 12166.347

Sistrunk Off-Street Parking Lot at NW. 12th Avenue



COREY RITCHIE PROJECT MANAGER

FAUSTO VARGAS PROCUREMENT SPECIALIST

Telephone: (954) 828-6167 E-mail: fvargas@fortlauderdale.gov

TABLE OF CONTENTS

<u>Description</u>		<u>Pages</u>	
I.	BID INFO	RMATION	
	Instruction	to Bid n to Biddersonditions	IB-1 thru IB-6
II.	CONSTR	UCTION AGREEMENT (SAMPLE)	
III.	GENERA	L CONDITIONS	GC-1 thru GC-11
IV.	TECHNIC	CAL SPECIFICATIONS	
	DIVISION	1 - GENERAL REQUIREMENTS	
	001001 001005 001010 001025 001031 001040 001045 001050 001060 001070 001090 001152 001200 001311 001312 001320 001340 001380 001400	General Requirements Technical Provisions Summary of Work Measurement and Payment Alteration Project Procedures Coordination Cutting and Patching Project Management Regulatory Requirements and Permits Abbreviations of Institutions Reference Standards Application for Payment Project Meetings Construction Process Documentation Field Engineering Project Record Documents Submittal Procedures Construction Photographs Quality Control	

DIVISION 1 – (cont'd)		<u>Pages</u>
001410	Testing Laboratory Services	
001505	Mobilization	
001510	Temporary Utilities	
001520	Construction Aids	
001530	Protection of Existing Facilities	
001550	Site Access and Storage	
001560	Temporary Controls	
001570	Traffic Regulations	
001590	Project SignConstruction Sign Request Form	
001600	Material and Equipment	
001700	Cleaning	
001710	Project Record Documents	
001720	Contract Closeout	
001700	Subcontractor Identification Forms	
DIVISION 2	2 – SITE CONSTRUCTION	
002050	Demolition	
002110	Clearing and Grubbing	
002200	Earthwork	
002211	Site Grading	
002220	Trenching, Backfilling and Compacting	
002260	Finish Grading	
002511	Concrete Sidewalks	
002513	Asphaltic Concrete Paving	
002515 002520	Portland Cement Concrete Paving Concrete Curbs and Headers	
002520	Pavement Marking and Post Signs	
002300	Storm Drainage System	
002720	Exfiltration Trench	
002760	Traffic Striping Paint	
002810	Irrigation System	
002920	Sodding	
002950	Landscaping	
002000		
DIVISION 1	6 – ELECTRICAL	
016010	Electrical General Provisions	E
016010	Codes & Standards	
016011	Raceway and Boxes	
016110	Conductors	
010120	Outiduo(0)3	

016140	Wiring Devices	4
	16 (cont'd)	<u>Pages</u>
016160	Panelboards	2
016180	Safety Switches, Circuit Breakers and Fuses	3
016190	Electrical Supporting devices	
016401	Electrical Service System	
016450	Grounding	3
016502	Site Lighting	2
016917	Electric System and Controls	2
002730	Exfiltration Trench	
002810	Irrigation System	15
002920	Sodding	6
002950	Landscaping	9

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

CITB Prime Contractor ID Form
CITB Local Business Preference
CITB Trench Safety
CITB Non-Collusion Statement
CITB Contract Payment Method
CITB Construction Bid Certification
Non-Discrimination Certification Form

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

<u>Certified Checks, Cashier's Checks and Bank Drafts</u> 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.

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.

<u>QUALIFICATIONS OF BIDDERS</u> – 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.

<u>PERSONAL INVESTIGATION</u> - 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.

<u>INCONSISTENCIES</u> – 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.

<u>LEGAL CONDITIONS</u> - 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.

<u>PUBLIC ENTITY CRIMES</u> - 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.

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

<u>FORMS OF PROPOSALS (CONTINUED)</u>. - 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.

<u>INSURANCE</u> - 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.

<u>BID BOND</u> - 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.

<u>FILLING IN BIDS</u> - 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.

<u>PRICES QUOTED</u>: 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.

<u>BIDS FIRM FOR ACCEPTANCE</u>: 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.

<u>ADDITIONAL ITEMS OR SERVICES</u>: The City may require additional items or services of a similar nature, but not specifically listed in the contract. The Contractor agrees to provide such items or

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

<u>DELETION OR MODIFICATION OF SERVICES</u>: 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.

<u>CAUSES FOR REJECTION</u> - 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.

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

BID PROTEST PROCEDURE: Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the City to follow the City's procurement ordinance or any applicable law may protest to the Procurement Division – Procurement Manager, by delivering a letter of protest within five (5) days after a Notice of Intent to award is posted on the City's website at the following link: http://www.fortlauderdale.gov/purchasing/notices of intent.htm.. The complete protest ordinance mav be found on the City's website following link: at the http://www.fortlauderdale.gov/purchasing/protestordinance.pdf

<u>WITHDRAWALS</u> - 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.

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

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

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

<u>ENFORCEMENT OF SPECIFICATIONS</u> - 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.

<u>COPIES OF DRAWING PLANS</u> - 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.

<u>SURETY BOND</u> – The Contractor shall execute and record in the public records of Broward County, Florida, a payment and performance bond in an amount at least equal to the Contract Price with a surety insurer authorized to do business in the State of Florida as surety, ("Bond"), in accordance with Section 255.05, Florida Statutes (2014), as may be amended or revised, as security for the faithful performance and payment of all of the Contractor's obligations under the Contract Documents.

The successful bidder shall furnish a performance and payment bond in compliance with Section 255.05, Florida Statutes, written by a Corporate Surety company, holding a Certificate of Authority from the Secretary of the Treasury of the United States as acceptable sureties on federal bonds, in an amount equal to the total amount payable by the terms of the contract, executed and issued by a Resident Agent licensed by and having an office in the State of Florida, representing such Corporate Surety, conditioned for the due and faithful performance of the work, and providing in addition to all other conditions, that if the Contractor, or his or its subcontractors, fail to duly pay for any labor, materials, or other supplies used or consumed by such Contractor, or his or its subcontractor or subcontractors, in performance of the work contracted to be done, the Surety will pay the same in the amount not exceeding the sum provided in such bonds, together with interest at the rate of fifteen percent (15%) per annum, and that they shall indemnify and save harmless the City of Fort Lauderdale to the extent of any and all payments in connection with carrying out of the contract, which the City may be required to make under the law.

The Contractor is required at all times to have a valid surety bond in force covering the work being performed. A failure to have such bond in force at any time shall constitute a default on the part of the Contractor. A bond written by a surety, which becomes disqualified to do business in the State of Florida, shall automatically constitute a failure on the part of the Contractor to meet the above requirements.

Such bond shall continue in effect for one (1) year after completion and acceptance of the work with liability equal to at least twenty-five percent (25%) of contract price, or an additional bond shall be conditioned that the Contractor will correct any defective or faulty work or material which appear within one (1) year after completion of the contract, upon notification by the City, except in contracts which are concerned solely with demolition work, in which cases twenty-five percent (25%) liability will not be

<u>AUDIT OF CONTRACTOR'S RECORDS</u> - 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.

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

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

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

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

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

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.

<u>DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS</u> - 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

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.

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 a fully function public parking lot at the southeast corner of Sistrunk Boulevard and NW 12th Avenue that includes 21 standard parking spaces, 1 accessible parking space and 8 bicycle parking spaces services for the Community Redevelopment Agency, 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 City Hall, 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 SUBMITALS WILL NOT BE ACCEPTED. PLEASE SUBMIT YOUR BID RESPONSE ELECTRONICALLY.

04. INFORMATION OR CLARIFICATION

For information concerning procedures for responding to this solicitation, contact **Fausto Vargas Procurement Specialist**, at (954) 828-6167 or email at <u>fvargas@fortlauderdale.gov</u>. 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. CONTRACT PERIOD

- 5.1 The Contractor recognizes that TIME IS OF THE ESSENCE. The Work shall commence within <u>30</u> calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within <u>180</u> 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 <u>210</u> calendar 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.

06. BID SECURITY

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

Rev. 8/5/2016 SC-2

07. REQUIRED LICENSES/CERTIFICATIONS

Contractor certified by State of Florida to perform the work specified in the scope. Must possess State of Florida General Contractor's License.

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

08. SPECIFIC EXPERIENCE REQUIRED

The contractor shall have previous construction experience in constructing **public parking lot with paving, striping and drainage system**, 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.

REFERENCES SHOULD NOT INCLUDE CITY OF FORT LAUDERDALE EMPLOYEES OR WORK PERFORMED FOR THE CITY.

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

09. BID ALLOWANCE

Allowance for permits: Payments will be made to the contractor based on the actual cost of permits upon submission of paid permit receipts. The City shall not pay for other costs related to obtaining or securing permits.

The amount indicated is intended to be sufficient to cover the entire project. If the City Permit fees exceed the allowance indicated, the City will reimburse the contractor the actual amount of City Permit Fees required for project completion.

Allowance	\$
FPL, AT&T allowance	5,000.00
Permit fees and testing allowance	25,000.00
Total	30,000.00

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

Rev. 5/1/2018 SC-3

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

Insurance

As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at 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:

10.1.1 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.

Rev. 5/1/2018 SC-4

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.

10.1.2 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.

10.1.3 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.

Rev. 8/5/2016 SC-5

- b. 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.
- c. 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.
- d. 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.
- e. 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.
- f. 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.
- g. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
- h. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- i. 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.

Rev. 5/1/2018 SC-6

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.

- 10.1.4 OPTIONAL COVERAGES (for specialty contracts as determined by Risk Management)
 - 10.1.4.1 Aircraft Liability N/A
 - 10.1.4.2 Crane and Rigging Liability N/A
 - 10.1.4.3 Cyber Liability N/A
 - 10.1.4.4 Fidelity/Dishonesty and/or Commercial Crime N/A

10.1.4.5 Garage Keepers Legal Liability	N/A
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- 10.1.4.6 Garage Liability N/A
- 10.1.4.7 Liquor Liability N/A
- 10.1.4.8 Physical Abuse, Sexual Misconduct, and Sexual Molestation N/A
- 10.1.4.9 Pollution and Remediation Legal Liability (Hazardous Materials) N/A
- 10.1.4.10 Contractors Pollution Liability Coverage N/A
- 10.1.4.11 Asbestos Liability Coverage N/A
- 10.1.4.12 <u>Disposal Coverage</u>
- 10.1.4.13 Hazardous Waste Transportation Coverage N/A
- 10.1.4.14 Professional Liability and/or Errors and Omissions N/A
- 10.1.4.15 Property Coverage (Builder's Risk).

Coverage must be afforded in an amount not less than 100% of the total project cost, including soft costs, with a deductible of no more than \$25,000 each claim. Coverage form shall include, but not be limited to:

- a. All Risk Coverage including Flood and Windstorm with no coinsurance clause
- **b.** Guaranteed policy extension provision
- **c.** Waiver of Occupancy Clause Endorsement, which will enable the City to occupy the facility under construction/renovation during the activity
- **d.** Storage and transport of materials, equipment, supplies of any kind whatsoever to be used on or incidental to the project
- **e.** Equipment Breakdown for cold testing of all mechanized, pressurized, or electrical equipment

This policy shall insure the interests of the owner, contractor, and subcontractors in the property against all risk of physical loss and damage, and name the City as a loss payee. This insurance shall remain in effect until the work is completed and the property has been accepted by the City.

10.1.4.16 Property Coverage (on-going basis) N/A

0.1.4.17 Watercraft Liability N/A

0.1.4.17 <u>Umbrella/Excess Liability:</u>

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

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

A <u>Sample Insurance Certificate</u> 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: One (1)

12. CITY PROJECT MANAGER

The Project Manager is hereby designated by the City as Corey Ritchie whose address is 914 Sistrunk Boulevard, Suite200, Fort Lauderdale, FL 33311, telephone number: (954) 828-5793, and email address is critchie@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 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.

15. WORK SCHEDULE (including overtime hours): <u>Standard</u>

Regular work hours: 9:00 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: \$ 219.00 per Hour.

CITY OF FORT LAUDERDALE CONSTRUCTION AGREEMENT

	THIS	AGREEN	ЛENT	made	and	entered	into	this		day	of
			, <u>20</u>	, by an	d betw	een the	City of	Fort	Lauderdale,	a Flo	rida
munio	cipal coi	rporation ((City) a	nd					, (C	ontract	tor),
(parti	es);										
Invita	tion to I	Bid No., <u>1</u>	1 2248-1 ; and,	93 , Pro	oject N	umber, _		,	ject as expre which was o	pened	l on
	WHER	EAS, the	Contrac	tor has	express	sed its wil	lingness	and o	apability to p	erform	the
neces	ssary wo	ork to acco	mplish t	the Proje	ect.						

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 <u>Agreement</u> 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 <u>Application for Payment</u> 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 <u>Approve</u> 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 <u>Bid</u> 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 <u>Bid Documents</u> –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 <u>Certificate of Substantial Completion</u> 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 <u>Change Order</u> 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 <u>City</u> 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 <u>Contract Documents</u> 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 <u>Contract Price</u> 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 <u>Contract Time</u> 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 <u>Contractor</u> 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 <u>Defective</u> 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 <u>Final Completion Date</u> 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 <u>Hazardous Materials (HAZMAT)</u> 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 <u>Hazardous Substance</u> 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 <u>Hazardous Waste</u> 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 <u>Holidays</u> Those designated non-work days as established by the City Commission of the City of Fort Lauderdale.
- 1.21 <u>Inspection</u> 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 <u>Notice of Award</u> 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 <u>Notice to Proceed</u> 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 <u>Plans</u> 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 <u>Premises (otherwise known as Site or Work Site)</u> means the land, buildings, facilities, etc. upon which the Work is to be performed.
- 1.26 <u>Project</u> 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 <u>Punch List</u> 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 <u>Record Documents</u> 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 <u>Substantially Completed Date</u> 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:

Sistrunk Off-Street Parking Lot at NW 12th Avenue

ITB #12248-193 PROJECT # 12166.347

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

PROJECT DESCRIPTION

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified bidders, hereinafter referred to as the Contractor, to provide <u>a fully function public parking lot at the southeast corner of Sistrunk Boulevard and NW 12th Avenue that includes 21 standard parking spaces, 1 accessible parking space and 8 bicycle parking spaces services for the Community Redevelopment Agency, in accordance with the terms, conditions, and specifications contained in this Invitation To Bid (ITB)</u>

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 <u>Corey Ritchie</u>, whose address is <u>100 N. Andrews Avenue</u>, <u>4 th Floor, Fort Lauderdale, FL 33301</u>, telephone number: (954) 828-5793, and email address is <u>critchie@fortlauderdale.gov</u>. 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 [1 inclusive).
- 4.4 Public Construction Bond, Performance Bond, Payment Bond and Certificates of Insurance.
- Notice of Award and Notice to Proceed. 4.5
- 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., 12248-193, Instructions to Bidders, and Bid Bond.
- 4.13 Contractor's response to the City's Invitation to Bid No., 12248-193, 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.
- 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:

C-6

- 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
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- g. Invitation to Bid No., 12248-193, and the specifications prepared by the City.
- h. Contractor's response to the City's Invitation to Bid No., <u>12248-193</u>, dated
- 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 <u>30</u> calendar days of the date of the Notice to Proceed.
- 5.2 The Work shall be Substantially Completed within <u>180</u> 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 \$________, 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.

Rev. 5/16/2014

- 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.

- 8.4The 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 <u>Labor</u>

- 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 8 a.m. and 4:30 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 <u>Permits:</u> 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 <u>Law and Regulations:</u> 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 <u>Taxes:</u> 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 <u>Contractor Use of Premises:</u> 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 <u>Project Coordination:</u> The Contractor shall provide for the complete coordination of the construction effort. This shall include, but not necessarily be limited to, coordination of the following:
 - 8.16.1 Flow of material and equipment from suppliers.
 - 8.16.2 The interrelated work with affected utility companies.
 - 8.16.3 The interrelated work with the City where tie-ins to existing facilities are required.
 - 8.16.4 The effort of independent testing agencies.
 - 8.16.5 Notice to affected property owners as may be directed by the Project Manager.
- 8.17 Project Record Documents and Final As-Builts (Record Drawings): Contractor shall be responsible for maintaining up-to-date redline as-built drawings, on site, at all times during construction. All as-built information shall be surveyed and verified by a professional land surveyor registered in the State of Florida. Contractor shall provide the City with a minimum of three (3) sets of signed and sealed record drawings (Final As-Builts) and a CD of the electronic drawings files created in AutoCad 2014 or later. All costs associated with survey work required for construction layout and as-built preparation shall be the responsibility of the Contractor.

8.18 Safety and Protection:

- 8.18.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 8.18.1.1 All employees working on the project and other persons who may be affected thereby.
 - 8.18.1.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
 - 8.18.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 8.18.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and utilities when execution of the Work may affect them at least seventy-two (72) hours in advance (unless otherwise required). All damage, injury or loss to any property caused, directly or indirectly, in whole or in part by the Contractor, any

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

- 8.19 <u>Emergencies:</u> 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 <u>Risk of Loss</u>: The risk of loss, injury or destruction shall be on the Contractor until acceptance of the Work by the City. Title to the Work shall pass to the City upon acceptance of the Work by the City.
- 8.21 Environmental: The Contractor has fully inspected the Premises and agrees, except as to the presence of any asbestos, to accept the Premises in an "as is" physical condition, without representation or warranty by the City of any kind, including, without limitation, any and all existing environmental claims or obligations that may arise from the presence of any "contamination" on, in or about the Premises. Further, Contractor and all entitles claiming by, through or under the Contractor, releases and discharges the City, from any claim, demand, or cause of action arising out of or relating to the Contractor's use, handling, storage, release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of any hazardous substances including asbestos on, under, from or about the Premises. The Contractor shall have no liability for any pre-existing claims or "contamination" on the Premises.

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

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

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

judgments, causes of action, in law or in equity, remedial action requirements and/or enforcement actions of any kind (including, without limitation, attorneys' fees and costs) directly or indirectly arising out of or attributable to, in whole or in part, the Contractor's use, handling, storage, release, threatened release, discharge, treatment, removal, transport, decontamination, cleanup, disposal and/or presence of a Hazardous Substance (excluding asbestos) on, under, from, to or about the Premises or any other activity carried on or undertaken on or off the Premises by the Contractor or its employees, agents or subcontractors, in connection with the use, handling, storage, release, threatened release, discharge, treatment, mitigation, natural resource restoration, removal, transport, decontamination, cleanup, disposal and/or presence or any Hazardous Substance including asbestos located, transported, or present on, undue, from, to, or about the Premises. This indemnity is intended to be operable under 42 U.S.C. 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 date 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 <u>Disqualification of Surety:</u> 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 Cityconfirmation 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.

Rev. 5/16/2014

10.3.5 ADDITIONAL REQUIRED COVERAGES (for specialty contracts as determined by Risk Management)						
10.3.5.1	Aircraft Liability N/A					
10.3.5.2	Crane and Rigging Liability N/A					
10.3.5.3	Cyber Liability N/A					
10.3.5.4	Fidelity/Dishonesty and/or Commercial Crime N/A					
10.3.5.5	Garage Keepers Legal Liability N/A					
10.3.5.6	Garage Liability N/A					
10.3.5.7	Liquor Liability N/A					
10.3.5.8	Physical Abuse, Sexual Misconduct, and Sexual Molestation N/A					

10.3.5.9 Pollution and Remediation Legal Liability (Hazardous Materials) N/A

- 10.3.5.10 Contractors Pollution Liability Coverage N/A
- 10.3.5.11 Asbestos Liability Coverage N/A
- 10.3.5.12 Disposal Coverage
- 10.3.5.13 <u>Hazardous Waste Transportation Coverage N/A</u>
- 10.3.5.14 Professional Liability and/or Errors and Omissions N/A
- 10.3.5.15 Property Coverage (Builder's Risk) N/A

Coverage must be afforded in an amount not less than 100% of the total project cost, including soft costs, with a deductible of no more than \$25,000 each claim. Coverage form shall include, but not be limited to:

- All Risk Coverage including Flood and Windstorm with no coinsurance clause
- **b.** Guaranteed policy extension provision
- c. Waiver of Occupancy Clause Endorsement, which will enable the City to occupy the facility under construction/renovation during the activity
- **d.** Storage and transport of materials, equipment, supplies of any kind whatsoever to be used on or incidental to the project
- e. Equipment Breakdown for cold testing of all mechanized, pressurized, or electrical equipment

This policy shall insure the interests of the owner, contractor, and subcontractors in the property against all risk of physical loss and damage, and name the City as a loss payee. This insurance shall remain in effect until the work is completed and the property has been accepted by the City.

- 10.3.5.16 Property Coverage (on-going basis) N/A
- 10.3.5.17 Watercraft Liability N/A
- 10.3.5.17 Umbrella/Excess Liability:

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

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

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

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

11.1 <u>Warranty:</u> 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 <u>Tests and Inspections:</u> 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 <u>Uncovering Work:</u> 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 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 <u>City May Stop the Work:</u> 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 <u>Disclaimer of Liability:</u> 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 <u>Indemnification:</u> 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, 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 quarantee.
 - 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 trails 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 filling 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 <u>Cost of the Work</u>: 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 <u>Not Included in the Cost of the Work:</u> The term "cost of the Work" shall not include any of the following:
 - 14.3.1 Payroll costs and other compensation of the Contractor's officers executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditor, accountants, purchasing and contracting agents, expediters, timekeepers, clerks and other personnel employed by the Contractor whether at the site or in the Contractor's principal or branch office for general administration of the work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 14.1.1, all of which are to be considered administrative costs covered by the Contractor's fee.
 - 14.3.2 Expenses of the Contractor's principal and branch offices other than the Contractor's office at the site.
 - 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.

C-6

- 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 <u>Basis of Compensation:</u> 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 <u>Cost Breakdown Required:</u> 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 <u>Time for the City to Approve Extra Work:</u> 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 <u>Rights of Various Interests:</u> 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 \$500 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.

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 <u>City May Suspend Work:</u> 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 <u>City's Right to Terminate Contract:</u> 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 Contactor otherwise violates any provisions of this Agreement.
- 17.3 If Contractor, within a period of ten (10) calendar days after such notice, shall not proceed in accordance therewith, the City may exclude the Contractor from the Work site and take the prosecution of the Work out of the hands of the Contractor, and take possession of the Work and all of the Contractor's tools, appliances, construction equipment and machinery at the site and use them without liability to the City for trespass or conversion, incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere, and finish the Work as the City may deem expedient. In this instance, the Contractor shall not be entitled to receive any further compensation until the Work is finished.
 - 17.3.1 If after notice of termination of Contractor's right to proceed, it is determined for any reason that Contractor was not in default, the rights and obligations of City and Contractor shall be the same as if the notice of termination had been issued pursuant to the Termination for Convenience clause as set forth in Section 17.5 below.
 - 17.3.2 Upon receipt of Notice of Termination pursuant to Sections 17.2 or 17.5, Contractor shall promptly discontinue all affected work unless the Notice of Termination directs otherwise and deliver or otherwise make available to City

all data, drawings, specifications, reports, estimates, summaries and such other information as may have been required by the Contract Documents whether completed or in process.

- 17.4 If the Contractor commits a default due to its insolvency or bankruptcy, the following shall apply:
 - 17.4.1 Should this Agreement be entered into and fully executed by the parties, funds released and the Contractor (Debtor) files for bankruptcy, the following shall occur:
 - 17.4.1.1 In the event the Contactor files a voluntary petition under 11 U.S.C. 301 or 302, or an order for relief is entered under 11 U.S.C. 303, the Contractor shall acknowledge the extent, validity, and priority of the lien recorded in favor of the City. The Contractor further agrees that in the event of this default, the City shall, at its option, be entitled to seek relief from the automatic stay pursuant to 11 U.S.C. 362. The City shall be entitled to relief from the automatic stay pursuant to 11 U.S.C. 362(d) (1) or (d) (2), and the Contactor agrees to waive the notice provisions in effect pursuant to 11 U.S.C. 362 and any applicable Local Rules of the United States Bankruptcy Court. The Contactor acknowledges that such waiver is done knowingly and voluntarily.
 - 17.4.1.2 Alternatively, in the event the City does not seek stay relief, or if stay relief is denied, the City shall be entitled to monthly adequate protection payments within the meaning of 11 U.S.C. 361. The monthly adequate protection payments shall each be in an amount determined in accordance with the Note and Mortgage executed by the Contractor in favor of the City.
 - 17.4.1.3 In the event the Contractor files for bankruptcy under Chapter 13 of Title 11, United States Code in additional to the foregoing provisions, the Contractor agrees to cure any amounts in arrears over a period not to exceed twenty-four (24) months from the date of the confirmation order, and such payments shall be made in addition to the regular monthly payments required by the Note and mortgage. Additionally, the Contractor shall agree that the City is over secured and, therefore, entitled to interest and attorney's fees pursuant to 11 Such fees shall be allowed and payable as an U.S.C. 506(b). 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 statethe 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:

p. 73

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	Contr	actor:		
•				

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. 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,

p. 74

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.
- 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 <u>Attorney Fees</u>: 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,

p. 76

CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT , 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.
- 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.
- 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.

2/4/2019 12:10 PM

C-6

Sistrunk Off-Street Parking Lot at NW 12th Avenue (Contractor) Project # 12166.347

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:CHRIS LAGERBLOOM , City Manager
(CORPORATE SEAL)	ATTEST:
ans it	By: JEFFREY A. MODARELLI City Clerk
"BIFF CO.	Approved as to Legal Form:
SAMI	By: RHONDA MONTOYA HASAN Assistant City Attorney

CONTRACTOR

WITNESSES:	CONTRACTOR., a Florida corporation.				
	By_				
Print Name	_	PRINT NAME	Title		
	D) (ATTEST	PELL		
Print Name	BY:	PRINT NAME	Secretary		
(CORPORATE SEAL)	,	CIIO.	•		
STATE OF FLORIDA: COUNTY OF BROWARD:	\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-				
Florida corporation, on behalf of the Corporati		pefore me this (Title) of	day of, 2018, by (CONTRACTOR), a		
SEAL	N	otary Public, State of	Florida		
5 '	N	ame of Notary Typed,	Printed or Stamped		
☐ Personally Known or ☐ Produced Ide	entifica	ation:			
Type of Identification Produced:					

GC-01- 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
 - 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.

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.

GC-3

Rev. 12/6/2016

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

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

GC - 22 - COORDINATION - The Contractor shall notify all utilities, transportation department, etc., in writing, with a copy to the Public Works Director before construction is started and shall coordinate his Work with them. The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal, construction and rearrangement operations in order that services rendered by these parties will not be unnecessarily interrupted.

The Contractor shall arrange his Work and dispose of his materials so as to not interfere with the operation of other Contractors engaged upon adjacent work and to join his Work to that of others in a proper manner and to perform his Work in the proper sequence in relation to that of other Contractors all as may be directed by the Public Works Director.

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

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

- **GC 23 WATER** Bulk water used for construction, flushing pipelines, and testing shall be obtained from fire hydrants. Contractor shall make payment for hydrant meter at Treasury Billing Office, 1st Floor, City Hall, 100 N. Andrews Avenue. With the paid receipt, contractor can pick up hydrant meter at the utility location office. No connection shall be made to a fire hydrant without a meter connected.
- GC 24 PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES Subject to Odebrecht Construction, Inc., v. Prasad, 876 F.Supp.2d 1305 (S.D. Fla. 2012), affirmed. Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), that it is not engaged in a boycott of Israel, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2016), as may be amended or revised. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2016), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2016), or is engaged in a boycott of Israel or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2016), as may be amended or revised.

- **GC 25 LOCATION OF UNDERGROUND FACILITIES** If the Proposer, for the purpose of responding to this solicitation, requests the location of underground facilities through the Sunshine State One-Call of Florida, Inc. notification system or through any person or entity providing a facility locating service, and underground facilities are marked with paint, stakes or other markings within the City pursuant to such a request, then the Proposer shall be deemed non-responsive to this solicitation in accordance with Section 2-184(5) of the City of Fort Lauderdale Code of Ordinances.
- GC 26 USE OF FLORIDA LUMBER TIMBER AND OTHER FOREST PRODUCTS In accordance with Florida Statute 255.20 (3), The City specifies that lumber, timber, and other forest products used for this project shall be produced and manufactured in the state of Florida if such products are available and their price, fitness, and quality are equal. This requirement does not apply to plywood specified for monolithic concrete forms, if the structural or service requirements for timber for a particular job cannot be supplied by native species, or if the construction is financed in whole or in part from federal funds with the requirement that there be no restrictions as to species or place of manufacture.

The Bidder affirms by submitting a bid response to this solicitation that they will comply with section 255.20 (3) Florida Statutes.

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

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

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE SOLICITATION AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE SOLICITATION OR ANY PART THEREOF AS COPYRIGHTED.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Telephone Number: (954) 828-5002

Mailing Address: City Clerk's Office

100 N. Andrews Avenue Fort Lauderdale, FL 33301

E-mail: prrcontract@fortlauderdale.gov.

Contractor shall:

- 1. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service.
- 2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2016), as may be amended or revised, or as otherwise provided by law.
- 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 01001 - GENERAL REQUIREMENTS

PART 1 PROJECT DESCRIPTION

1.1 GENERAL

- A. A brief description of the Work is stated in the INVITATION TO BID. To determine the full scope of the project or any particular part of the project, coordinate the applicable information in these Contract Documents and review the available project drawings.
- B. The Work under this Contract shall be performed by the Contractor as required by the City of Fort Lauderdale (City). Work will be authorized by a Notice to Proceed (NTP) issued to the Contractor. The Contractor shall complete all work within the number of calendar days stipulated in the Contract unless an extension in the time of completion is granted by the CITY'S PROJECT MANAGER, as stated in the Instructions to Bidders. Upon satisfactory completion of the work and compliance with applicable provisions in the Contract Documents, the Contractor will receive final payment for all work done.
- C. The following additional information, though not all-inclusive, is given to assist contractors in their evaluation of the work required to meet the project objectives.
- D. The Contractor shall become familiar with the existing operating conditions of the City's water system, sewage transmission system and pumping stations and take such into consideration in planning and scheduling work. No extra claims shall be made for work required to achieve conditions beyond those obtainable under normal operation of the existing transmission, collection and pumping facilities necessary to accomplish the Work.
- E. Contractor shall be required to submit a Maintenance of Traffic (MOT) plan for work in the city, county and state highways and City streets. Contractor shall coordinate with MOTs for nearby or highway work and obtain approval for all traffic control as required by the permits contained elsewhere in this Section.

PART 2 SEQUENCE OF OPERATIONS

2.1 SCHEDULING

- A. General: Prepare and submit schedule in accordance with the provisions of Section 01311, Construction Progress Documentation.
- B. Plan the work and carry it out with minimum interference to the operation of the existing facilities. Prior to starting the work, confer with the CONSULTANT ENGINEER and CITY's PROJECT MANAGER to develop an approved work schedule, which will permit the facilities to function normally as practical. It may be necessary to do certain parts of the construction work outside normal working hours in order to avoid undesirable conditions. The Contractor shall do this work at such times and at no additional cost to the City.

PROJECT 12166

Do not make connections between existing work and new work until necessary inspection and tests have been completed on the new work and it is found to conform in all respects to the requirements of the Contract Documents.

- C. No work shall be started until the Contractor has received approved shop drawings, established material/delivery dates for all equipment, and received approval of the construction schedule from the CONSULTANT ENGINEER and CITY's PROJECT MANAGER. The Contractor shall have sufficient manpower, equipment, and material to complete the project.
- D. No work shall commence without express consent of the CONSULTANT ENGINEER and CITY'S PROJECT MANAGER.
- E. If a privately owned staging area is required, no work shall commence until approval of the facility is obtained from City Planning and Zoning in accordance with Section 47-19.2 of the Unified Land Development Regulations. Submit a copy of the approval and agreement to the CONSULTANT ENGINEER and CITY's PROJECT MANAGER.

2.2 MOBILIZATION AND DEMOBILIZATION

A. Contractor shall be responsible for mobilization and demobilization of labor, materials and equipment. Payment for mobilization and demobilization shall be included in the lump sum price indicated in the Proposal for the project.

2.3 COORDINATION

- A. Contractor shall cooperate in the coordination of separate activities in a manner that will provide the least interference with the Owner's operations and other contractors and utility companies working in the area, and in the interfacing and connection of the separate elements of the overall project work.
- B. If any difficulty or dispute should arise in the accomplishment of the above, the problem shall be brought immediately to the attention of the CONSULTANT ENGINEER and CITY'S PROJECT MANAGER.

2.5 OPERATION OF EXISTING SYSTEM PROHIBITED

A. At no time is the Contractor to undertake to close off any utility lines or open valves or take any other action, which would affect the operation of existing systems. The City's operations crew will operate all valves. Provide at least one business day notice to City prior to any operations.

PART 3 SITE CONDITIONS

3.1 SITE INVESTIGATION AND REPRESENTATION

A. The Contractor acknowledges satisfaction as to the general nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation, availability of labor, water, electric power, roads, and uncertainties of weather, river stages, or similar physical conditions,

Page 92 of 409

PROJECT 12166

the character of equipment and facilities needed preliminary to and during the prosecution of the work, and all other matters which can in any way affect the work or the cost thereof under this Contract.

- B. Failure by the Contractor to become acquainted with the physical conditions and all the available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the Work.
- C. The Contractor warrants that as a result of examination and investigation of all the aforesaid data, the Contractor can perform the work in a good and workmanlike manner and to the satisfaction of the City. The City assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract; and (2) the Contract expressly provides that the responsibility therefore is assumed by the City.

3.2 INFORMATION ON SITE CONDITIONS

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

3.3 UTILITIES

- A. The Contractor shall be responsible for determining and/or confirming, at his cost, the locations of all utilities within the project area, and shall be responsible for contacting each utility for location and notification prior to commencing work.
- B. The Contractor shall contact potentially affected utilities as provided in Section 01060, Regulatory Requirements & Permits.
- C. The Contractor shall contact Sunshine State One Call at 811 or visit www.callsunshine.com at least 2 business days (10 business days for water crossings) prior to any excavation and make arrangements for locating all utilities in the project area.

3.4 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

- A. Where the Contractor's operations could cause damage or inconvenience to utilities, telephone, television, power, water, or sewer systems, the operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by the Contractor with the owner of the utility affected.
- B. Notify all utility offices, which are affected by the construction operation at least 2 business days in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has

been granted, locate, expose, and provide temporary support for all existing underground utilities.

- C. The Contractor shall be solely and directly responsible to the Owner and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage, which may result from the construction operations under this Contract.
- D. Neither the Owner nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the Work.
- E. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no case shall interruption of any water or utility service be allowed to exist outside working hours unless prior approval is granted.
- F. In the event the Contractor encounters water service lines or sewer laterals that interfere with trenching, he may, by obtaining prior approval of the property owner, and the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense.
- G. The Contractor shall replace, at his own expense, all existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract documents or ordered by the CONSULTANT ENGINEER and CITY'S PROJECT MANAGER.
- H. Telephone and communications drops and signal systems may extend throughout the project area. Properly located cable, conduit, interface equipment, pull or junction boxes and other signal or systems equipment damaged by the Contractor shall be replaced at the Contractor's expense.
 - a. Damaged cable shall be replaced as an entire run, from junction box to junction box.
 - b. Notify Broward County Engineering two business days in advance of the need to remove traffic detection loops.
 - c. Contractor shall verify marked cables and signal systems prior to excavation.

3.5 INTERFERING STRUCTURES

- A. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground.
- B. Protect underground and aboveground existing structures from damage, whether or not they lie within the limits of the easements obtained by the City.

Where such existing fences, gates, sheds, buildings, or any other structure must be removed in order to properly carry out the construction, or are damaged during construction, restore to their original condition to the satisfaction of the property owner involved at the Contractor's own expense. Notify the City of any damaged underground structure, and make repairs or replacements before backfilling.

C. Without additional compensation, the Contractor may remove and shall replace in a condition as good as or better than original, such small miscellaneous structures as fences, mailboxes, and signposts that interfere with the Contractor's operations.

3.6 EASEMENTS AND WORK ON PRIVATE PROPERTY

- Where portions of the work are located on public or private property, easements Α. and permits will be obtained by the City, except as otherwise noted in these Specifications. Easements will provide for the use of property for construction purposes to the extent indicated on the easements. Copies of these easements and permits are available upon request to the City. It shall be the Contractor's responsibility to determine the adequacy of the easement obtained in every case and to abide by all requirements and provisions of the easement. The Contractor shall confine his construction operations to within the easement limits or street right-of-way limits or make special arrangements with the property owners or appropriate public agency for the additional area required. Any damage to property, either inside or outside the limits of the easements provided by the City or street rights-of-way, shall be the responsibility of the Contractor as specified herein. The Contractor shall provide immediate notice to the owner of any damage to fencing and provide temporary fencing as required to provide a functionally similar level of security. The Contractor shall remove, protect, and replace all fences or other items encountered on public or private property. Before final payment will be authorized by the CONSULTANT ENGINEER and CITY's PROJECT MANAGER, the Contractor will be required to furnish the City with written releases from property owners or public agencies where side agreements or special easements have been made by the Contractor or where the Contractor's operations, for any reason, have not been kept within the construction right-of-way obtained by the City or the street right-of-way.
- B. The Contractor shall be responsible for all damage to private property where work related activities have occurred without proper easement or authorization. The City may withhold payment to the Contractor pending resolution of any claims by private owners.
- C. It is anticipated that the required easements and permits will be obtained before construction is started. However, should the procurement of any easement or permit be delayed, the Contractor shall schedule and perform the work around these areas until such a time as the easement or permit has been secured.
- D. Prior to removing an existing structure or item, provide written notice to the Owner at least 14 days in advance of the anticipated removal.
- E. The Contractor shall not engage in private construction activities within the

project area without the presence of a contract with the private owner of the property containing a hold harmless clause protecting the City from any and all damages that occur during the performance of the privately authorized work.

PART 4 SAFETY AND CONVENIENCE

4.1 SAFETY AND ACCESS

- A. The Contractor shall do all work necessary to protect the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes in pedestrian sidewalk or walkway, and trenches or excavations in roadway. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the work. All barricades and signs shall be clean and serviceable, in the opinion of the CONSULTANT ENGINEER and CITY'S PROJECT MANAGER.
- B. During construction, the Contractor shall construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railing, barricades or steel plates, as applicable, at all openings, obstructions, or other hazards in streets, sidewalks, floors, roofs, and walkways. All such barriers shall have adequate warning lights as necessary, or required, for safety. All lights shall be regularly maintained, and in a fully operational state at all times.
- C. The Contractor shall notify all residences and businesses of planned construction at least 5 (five) business days prior to the start of work in the block where they are located. Such notices shall be brochures or door-hangers with sufficient information to describe the extent and duration of the planned work. Notification activities shall be coordinated with the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER.
- D. Homeowners and business owners shall be provided reasonable access. The Contractor shall provide temporary sidewalks, bridges or driveway access, including safe passage over open excavations as required.

4.2 ACCIDENT REPORTS

- A. In addition, the Contractor must promptly report in writing to the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the ENGINEER.
- B. If a claim is made by anyone against the contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER, giving full details of the claim.

4.3 SAFE ACCESS BY FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

A. Authorized representatives of the state, federal, or local governmental agencies, shall at all times have safe access to the work, and the Contractor

Page 96 of 409

shall provide proper facilities for such access and inspection.

4.4 PROTECTION OF PROPERTY

- A. Protect stored materials located adjacent to the proposed work. Notify property owners affected by the construction at least two business days in advance of the time construction begins. During construction operations, construct and maintain such facilities as may be required to provide access by all property owners to their property. No person shall be cut off from access to his residence or place of business for a period exceeding 2 hours, unless the Contractor has made special arrangements with the affected persons.
- B. The Contractor shall identify and isolate his active work zone in such a manner as to exclude all personnel not employed by him, the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER, and the City.

4.5 FIRE PREVENTION AND PROTECTION

A. The Contractor shall perform all work in a fire-safe manner. He shall supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable federal, state, and local fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.

4.6 ACCESS FOR POLICE, FIRE, AND POSTAL SERVICE

- A. Notify the fire department and police department before closing any street or portion thereof. No closing shall be made without the Owner's approval of MOT plan. Notify said departments when the streets are again passable for emergency vehicles. Do not block off emergency vehicle access to consecutive arterial crossings or dead-end streets, in excess of 300 linear feet, without special written permission from the fire department. Conduct operations with the least interference to fire equipment access, and at no time prevent such access. MOT plans that result in restricted access for emergency vehicles must be submitted and approved 2 weeks prior to the proposed closing with separate and specific notification made to the ENGINEER to provide for appropriate agency coordination.
- B. The Contractor shall leave a night emergency telephone number or numbers with the police department, the Engineer, and the Owner, so that contact may be made easily at all times in case of barricade and flare trouble or other emergencies.
- C. Maintain postal service facilities in accordance with the requirements of the U.S. Postal Service. Move mailboxes to temporary locations designated by the U.S. Postal Service, and at the completion of the work in each area, replace them in their original location and in a condition satisfactory to the U.S. Postal Service.

PART 5 PRESERVATION, RESTORATION, AND CLEANUP

5.1 SITE RESTORATION AND CLEANUP

- A. At all times during the work, keep the premises clean and orderly, and upon completion of the Work, repair all damage caused by equipment and leave the project free of rubbish or excess materials of any kind.
- B. Stockpile excavated materials in a manner that will cause the least damage to adjacent lawns, grassed areas, gardens, shrubbery, or fences, regardless of whether these are on private property, or on state, county, or city rights-of-way. Remove all excavated materials from grassed and planted areas, and leave these surfaces in a condition equivalent to their original condition. Replace excavated areas as specified in Section 02221, Trench Excavation and Backfill, raked and graded to conform to their original contours.

5.2 FINISHING OF SITE, BORROW, AND STORAGE AREAS

A. Upon completion of the project, all areas used by the Contractor shall be properly cleared of all temporary structures, rubbish, and waste materials and properly graded to drain and blend in with the abutting property. Areas used for the deposit of waste materials shall be finished to properly drain and blend with the surrounding terrain. Grassed areas shall be restored as specified.

5.3 HISTORIC PRESERVATION

- A. The Contractor shall coordinate with the historic preservation representative supplied by the owner for initial excavation operations. If the project work should uncover prehistoric or historic artifacts associated with Native American cultures, early colonial cultures, or American settlements, all project activities in the area shall cease immediately.
- B. All such discoveries shall be reported to the Division of Historical Resources. Review and Compliance Section at (800) 847-7278.
- C. Project activities in the affected area cannot resume without authorization from the Division of Historic Resources.

PART 6 PERMITS

6.1 GENERAL

- A. City has prepared the following application for the Contractor to submit and obtain Permit:
 - Not Applicable for this project.
- B. Permits to be obtained by the Contractor include, but are not limited to the following:
 - a. Local, County, and State contracting licenses as required.
 - b. MOT approval from local, county, and state agencies as required.
 - c. Broward County Planning and Environmental Regulation Division

Page 98 of 409

Exhibit 1

SISTRUNK PARKING LOT 12

PROJECT 12166

(BCPERD): Dewatering permit, including National Pollution Discharge Elimination System (NPDES) permit if required. Environmental Recourse Permit if necessary.

- d.
- C. The Contractor shall comply with all applicable permit conditions.

END OF SECTION

SECTION 01005 - TECHNICAL PROVISIONS

PART 1 GENERAL

1.1 SCOPE

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

1.2 ITEMS SPECIFIED ON DRAWINGS

A. Items of material, equipment, machinery and the like may be specified on the Drawings and not in the Technical Specifications. The CONTRACTOR shall provide such items in accordance with the General Notes on the Drawings.

1.3 FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS

A. After completion of construction, the CONTRACTOR shall provide three (3) sets of signed & sealed. As-Built Drawings with all the As-Built information; all locations, coordinates, dimensions and elevations of the constructed facilities, certified, signed and sealed thereon by a Land Surveyor registered in the State of Florida. All elevations shall refer to N.G.V.D. 29 (National Geodetic Vertical Datum of 1929) and all state plane coordinates shall be NAD 83 (with 1990 adjustment). The cost of such field layout and recording work shall be the responsibility of the CONTRACTOR. The As-Built utility information shall meet the requirements of the City of Fort Lauderdale and any other permitting agencies having jurisdiction on this project.

1.4 SALVAGE

A. Any existing equipment or material, including but not limited to valves, pipes, fittings, couplings, etc., which is removed as a result of construction under this project may be designated as salvage by the CONTRACT ADMINISTRATOR, and if so, shall be delivered clean to the CITY at a location directed by the CONTRACT ADMINISTRATOR. Any equipment or material not worthy of salvaging shall be disposed of by the CONTRACTOR at a suitable location in accordance with all applicable regulations, ordinances and laws at no additional cost to the CITY.

1.5 POWER

A. The CONTRACTOR shall furnish and pay for all electrical power required for the construction, testing and trial operation, prior to final acceptance by the CITY.

1.6 WATER SUPPLY

A. All water required for testing, flushing, and construction shall be furnished by the CITY and paid for by the CONTRACTOR. The purchase price shall be the prevailing rate as published by the CITY. The quantity of water used shall be determined by reading the meter at the start and at the finish of construction. The CONTRACTOR shall make all arrangements and incur all expense involved in having the CITY provided with a vacuum relief or backflow preventer which shall meet the requirements of ASA A40.6, latest revision, and the local administrative authority.

1.7 MAINTENANCE

- A. The CONTRACTOR shall fully cooperate at all times with the CITY in order to maintain the operation of the existing water and/or sewer system with the least amount of interference and interruption possible. The schedule plans and work of the CONTRACTOR shall at all times be subject to alteration and revision if necessary for public health and safety considerations. The creation of a public nuisance will not be permitted.
- B. It may be necessary to interrupt the operation of the existing water and/or sewer system. In all cases where the CONTRACTOR must cause an interruption, CONTRACTOR shall prepare and submit to the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER four (4) working days prior to commencing the work, a complete description of the proposed procedure and a time schedule, which CONTRACTOR will guarantee. At least forty-eight (48) hours prior to the time proposed for starting the work, the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER will notify the CONTRACTOR whether or not the work will be permitted as proposed.
 - a. The CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER reserves the right to require the CONTRACTOR to work 24 hours per day in all cases where, in ENGINEER'S opinion, interference with operation of the system may result in dangerous health hazards or offensive conditions.
 - b. In no case will the CONTRACTOR be permitted to interfere with the existing system until all materials, supplies, equipment, tools and incidentals necessary to complete the work are on the site. Backup equipment on key equipment items shall be required on work necessitating interference with the existing system.

1.8 SITE RESTORATION

A. The CONTRACTOR shall remove all excess material and shall clean up and restore the site to its original condition or better. All damage, as a result of work under this Contract, done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basins, flagstones, rocked, graveled, or stabilized areas of driveways, and including all obstructions not specifically named herein, shall be repaired, or replaced, as determined by the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER. Site restoration shall be done in a timely manner as the work progresses. Site restoration work shall be completed on private property within 30 days after being disturbed.

1.9 SANITARY FACILITIES

A. The CONTRACTOR shall provide temporary facilities at the site as directed by the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER.

1.10 STANDARDS

A. Wherever in these TECHNICAL SPECIFICATIONS or in the drawings name and/or number refer to certain standards or regulations, the applicable publication shall be the latest revision thereof. Reference by abbreviation is made in accordance with the Section 01070, "Abbreviations of Institutions."

1.11 QUALITY OF ITEMS

A. All material furnished for this project shall be new and unused. Any material, which has become excessively weathered or damaged since manufacture, shall not be considered as new. CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER shall be the sole judge as to what constitutes excessive weathering or damage.

1.12 TESTING

- A. The City of Fort Lauderdale Engineering Minimum Design and Construction Standards may require that materials and equipment supplied meet given standards and testing to demonstrate conformance to the standards is a part of those standards. The cost of these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.
- B. The CONTRACTOR shall select a recognized, independent testing laboratory to make tests on concrete, asphalt, soils and other materials for the construction phase, to test for conformity with the TECHNICAL SPECIFICATIONS, FDOT and BROWARD COUNTY Construction Standards, and any other applicable testing/Quality control standards as required by all permitting agencies having jurisdiction over this project. The CONTRACTOR shall supply the necessary samples for this testing without cost to the CITY. The costs for actual testing shall be paid by the CONTRACTOR and scheduling of all required tests will be the responsibility of the CONTRACTOR.
- C. Construction in areas where installation and restoration must satisfy the additional requirements of a local, state or federal authority may require testing to demonstrate conformance. The CONTRACTOR shall ascertain the extent of testing required by regulatory agencies within these areas. The CONTRACTOR is responsible for performing such tests, including but not limited to, tests of compaction, and all costs for these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.

1.13 UTILITY CROSSINGS

A. It is intended that wherever existing utilities must be crossed that the pipe may be deflected up to 75% of the manufacturer's recommended limits, but shall not exceed the allowable limits of the CITY. Adequate cover shall be used to adequately clear the obstruction. However, when in the opinion of the CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER, this procedure

is not feasible CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER may direct the use of fittings to clear a utility crossing as detailed on the Drawings. The cost of such crossing including joint restraints shall be on the basis of the schedule of pay items applied.

B. Deflections and adjustments of the proposed water and/or sewer mains to avoid all other existing utilities shall be verified/determined in the field during construction.

1.14 BASIS OF MEASUREMENT

A. Where mains are to be paid for on a unit price per linear foot basis, the number of linear feet will be determined by measurement along the centerline of the pipe in place, including fittings. Square yardage will be determined by the actual number of square yards installed.

1.15 ADJUSTMENT AND RELOCATION OF EXISTING LINES

A. When the drawings indicate that existing lines must be deflected, the pipe may be deflected up to 75% of the manufacturer's recommended limits but shall not exceed the allowable limits of the CITY. The CONTRACTOR will need to be directed by the ENGINEER. If the ENGINEER determines that the use of new pipe and fittings is required for deflection, the CONTRACTOR will be directed to use this method. The price for either method shall be based upon the unit prices bid. This does not apply to connections to existing system (Paragraph 1.17, this Section).

1.16 CONNECTION TO EXISTING SYSTEM

- A. The CONTRACTOR shall perform all work necessary to locate, excavate and prepare for connection to the existing mains as shown on the Drawings. The cost of this work and for the actual connection to the existing main shall be based upon the unit prices for installing the pipe and appurtenances and shall not result in any additional cost to the CITY. The cost of ductile iron sleeves shall be included in the fittings unit price.
- B. Additional valves used for the CONTRACTOR's convenience shall not be considered as an extra cost payable by the CITY for the tie-in to the existing system.
- C. During all phases of the work, (i.e. installation, testing and restoration), the CONTRACTOR shall ensure at all times the safe operation of the existing water and/or sewage systems. Service to the customers shall be maintained with the least amount of interference and interruption as possible.

1.17 RELOCATIONS

A. The CONTRACTOR shall be responsible for the relocation of structures that are shown on the drawings, including, but not limited to, light poles, signs, fences, piping, conduits and drains that interfere with the proposed positioning of the water/sewer mains. The cost of all such relocations shall be included in the prices bid for the appropriate items.

1.18 UTILITIES

A. Existing utilities are shown on the Drawings insofar as information is reasonably available; however, it will be the responsibility of the CONTRACTOR to preserve all existing utilities whether shown on the Drawings or not. If utility conflicts are encountered by the CONTRACTOR during construction, CONTRACTOR shall give sufficient notice to the CITY so that they may make the necessary adjustments. Damage to any utility, which in the opinion of the CITY is caused by carelessness on the part of the CONTRACTOR, shall be repaired at the expense of the CONTRACTOR.

1.19 GUARANTEE

- A. The CONTRACTOR shall guarantee the equipment, material and labor performed under the Contract against any and all failures in proper use and operation for a period of one (1) year from date of written acceptance by the CITY.
- B. The CONTRACTOR shall also obtain warranties from manufacturers for each piece of equipment furnished so that the manufacturer's warranty fully covers the equipment for a period of one (1) year from the date of written acceptance by the CITY, unless otherwise specified in the specifications.

1.20 PERFORMANCE OF WORK

- A. The CONTRACTOR shall provide all personnel and equipment required to complete all work specified herein and on the Drawings. In an emergency situation, if the CITY determines that it must provide staff and/or equipment to assist the CONTRACTOR in the satisfactory performance of the Contract terms and conditions, the CONTRACTOR at the applicable prevailing wage rates shall reimburse the CITY.
- B. CONTRACTOR shall provide forty-eight (48) hours advance written notice to the CITY for approval of CONTRACTOR'S intention to work overtime on weekdays or to work on the weekends.

1.21 BARRICADING (SAFETY)

- A. The CONTRACTOR shall be responsible for the furnishing and maintaining of all required barricades, either the lighted or the reflector type, to ensure the public's safety during open trench work or for any other potentially unsafe or hazardous construction activities. Barricades shall be located and displayed in conformance with the most stringent regulations required by the governing agencies. All costs for barricading, including any permits, shall be the responsibility of the CONTRACTOR.
- B. All work in public rights-of-way and on private property shall be done in strict compliance with these specifications and Florida Department of Transportation Minimum Standards. Failure to so comply will result in cessation of operations and the removal of project related obstructions from the right-of-way until

compliance is achieved.

1.22 EMERGENCY ACCESS AND SECURITY

- A. In order to provide protection to the workers and residents, the CONTRACTOR shall maintain emergency access to the property at all times during construction. These access ways shall be protected and delineated with lighted barricades or other such devices as approved by the regulatory agency. Both ends of the emergency access way shall be blocked in accordance with the MOT permit approved by the CITY with signage indicating that this access way is to be used by emergency vehicles only.
- B. No trenches or holes shall be left open after working hours. In the event a trench must be left open after hours, it shall be done so only with the express written permission from the ENGINEER, and it shall be the CONTRACTOR'S responsibility to provide proper protection of the open trench or hole as required by the regulatory agency. In addition, the CONTRACTOR shall provide a security guard at the site whenever the CONTRACTOR'S personnel are not present, 24 hours per day/ 7 days per week. It shall be the Security Guard's responsibility to protect the open trench or hole from trespassers and to direct emergency personnel on site. The Security Guard shall not have any other responsibilities such as operating pumps or equipment but shall be dedicated to protecting the trench or open hole. The Security Guard shall be equipped with a wireless telephone capable of calling 911 to report an emergency and shall keep that telephone on their person at all times. In addition to this provision the CONTRACTOR shall maintain trench safety and comply with current OSHA regulations and the Trench Safety Act. The CONTRACTOR shall maintain and keep all safety barricades, signage, flashers, and detours, in operating condition. A copy of the approved MOT plans, and details, shall be on site at all times.
- C. All roads are to be maintained during the described construction as to always allow Emergency Access. This item will be paid for under the bid item for Mobilization as named in the Bid Schedule.

1.23 VIBRATORY COMPACTION

A. The use of vibratory compaction equipment shall be limited to a total gross weight of three (3) tons. The use of vibratory equipment shall be limited to compacting backfill of utility trenches and subgrade of paved areas only. If approved in writing by the ENGINEER, larger vibratory compaction equipment may be allowed if operated in a static mode only.

1.24 REPORTING OF DAMAGE CLAIMS

A. The CONTRACTOR shall keep the CITY informed of any damage claims made against the CONTRACTOR during the construction period. All claims for automobile damage, property damage/bodily injury will be reported to the CONTRACT ADMINISTRATOR within 24 hours of receipt of notice. CONTRACTOR will conduct a timely investigation of the claim and determine if they will honor the claim and/or report to their insurance carrier. CONTRACTOR will advise the City of Fort Lauderdale in writing of their decision/referral to carrier.

SISTRUNK PARKING LOT 12

PROJECT 12166

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01010 - SUMMARY OF WORK

PART 1 GENERAL

1.1 SCOPE

- A. City: City of Fort Lauderdale
 - a. City's Representative/Engineer: *Shiau Ching Low, Project Manager II*, or designated representative.

1.2 NOTICE TO BIDDERS

- A. The successful bidder, in order to be considered responsive, must possess the appropriate License as described in the Contract Documents.
- B. It should also be noted that the successful bidder will, at the time of the preconstruction conference, be required to show that each of the CONTRACTOR'S subcontractors is in compliance with the City's Code of Ordinances.

1.3 SITE INVESTIGATION

- A. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and all subcontractors have satisfied themselves to the nature and location of the work, the general and local conditions including, but not restricted to: those bearing upon transportation; disposal, handling and storage of materials; access roads to the site; the conformation and conditions of the work area; and the character of equipment and facilities needed preliminary to and during the performance of the work. Failure on the part of the CONTRACTOR to completely or properly evaluate the site conditions shall not be grounds for additional compensation.
- B. Soil boring information will not be furnished to the CONTRACTOR. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and subcontractors have satisfied themselves as to the nature and extent of soil and (underground) water conditions on the project site. No additional payment will be made to the CONTRACTOR because of differences between actual conditions and those shown by the boring logs.

1.4 WORK BY OTHERS

- A. <u>Concurrent Work by Other CONTRACTORS</u>. The CONTRACTOR'S attention is directed to the fact that other CONTRACTORS may conduct work at the site during the performance of the WORK under this Contract. The CONTRACTOR shall conduct its operations so as to cause little or no delay to WORK of such other CONTRACTORS, and shall cooperate fully with such CONTRACTORS to provide continued safe access to their respective portions of the site, as required to perform work under their respective contracts.
- B. <u>Interference with Work on Utilities</u>. The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies

SUMMARY OF WORK 01010-1

engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.5 WORK SEQUENCE

A. The CONTRACTOR shall schedule and perform the work in such a manner as to result in the least possible disruption to the public's use of the parking lot and park facilities, roadways, driveways, and utilities. Utilities shall include but not be limited to water, sewerage, drainage structures, ditches and canals, gas, electric, television and telephone. Prior to commencing with the WORK, CONTRACTOR shall perform a location investigation of existing underground utilities and facilities in accordance with Section 01530 entitled "Protection of Existing Facilities" and shall have obtained all required permits and permissions, CONTRACTOR shall also deliver written notice to the CITY, ENGINEER, and property occupants (private and public) of all planned disruption to roadway, driveways, temporary displacement of fences, mailboxes, street signs and traffic signs, and utilities 72 hours in advance of disruption.

1.6 WORK SCHEDULE

A. Time is of the essence in completing this project. Because time is of the essence the CONTRACTOR shall commit the necessary resources to this project to complete it in a timely manner. Those resources may include multiple working crews, working overtime, etc. Because time is of the essence, the CONTRACTOR'S construction progress will be monitored closely on a weekly basis. The Construction progress will be measured with the construction schedule submitted by the CONTRACTOR. If the ENGINEER determines that the CONTRACTOR does not meet the Critical Path Method (CPM) as specified in Section 01311, the CONTRACTOR will be required to commit those resources necessary to ensure the completion of the project in a timely manner including working overtime, adding other work crews, etc. All costs incurred to implement measure to complete the work in timely manner will be borne by the CONTRACTOR at no additional cost to the OWNER.

B. REQUIRED PERIODS OF WORK SUSPENSION

- a. CONTRACTOR shall shut down operations for all City Holidays, terminating production work by noon on the day preceding the holiday (or the weekend before said holiday) and not resuming operations until the start of the following week (or the day after the holiday, whichever is later). The CONTRACTOR shall ensure that the site is restored per Sections 01001 and 01010 and all areas that are off limits to the public will be clearly delineated and protected. For a full list of holidays, please refer to the City; however these include, but are not limited to New Year's Eve and Day, Martin Luther King's Birthday, Memorial Day, the 4^{4th} of July, Labor Day, Thanksgiving Day and the day after Thanksgiving Day, Christmas Eve and Christmas.
- b. The CONTRACTOR shall include these provisions in the schedule required in 01311 and there shall be no additional time granted for these

SUMMARY OF WORK

work suspensions.

- c. No additional compensation shall be granted for demobilization, cleaning and remobilization as a result of these work suspensions.
- d. During the work suspensions, the CONTRACTOR shall remain liable for the safety and security of the project site and be available 24 hours per the Contract Documents. CONTRACTOR shall have personnel visit the site daily during these suspensions to ensure the safety and security of the site.

C. SCHEDULE

- a. CONTRACTOR shall submit scheduling information for the work as required in Section 01311 "Construction Progress Documentation".
- b. No separate payment shall be made for preparation and/or revision of the schedule.
- D. On-Site Work Hours: Work hours shall be defined at the pre-construction meeting and shall comply with all permit conditions. Except otherwise indicated, work shall be performed during normal business working hours of 7:30 a.m. to 4:00 p.m., Monday through Friday.

1.7 COMPUTATION OF CONTRACT TIME

A. It is the CONTRACTOR'S responsibility to provide clear and convincing documentation to the ENGINEER as to the effect additional work will have with respect to additional contract time extension that may be justified. If additional quantities of work can be carried out concurrent with other existing construction activities without disrupting the critical path of the project then no contract time extension will be granted. The CONTRACTOR is obligated to provide documentation to the ENGINEER if additional elements of work affect the critical path of the project. If work set forth in the original scope of the project is deleted, the contract time may be reduced. This contract is a calendar day contract. While the CONTRACTOR may be granted time to suspend work operations for vacations or holidays, contract time will not be suspended. During suspensions, the CONTRACTOR shall be responsible for all maintenance of traffic and liability without additional compensation from the CITY.

1.8 CONTRACTOR USE OF PREMISES

A. The CONTRACTOR's use of the project site shall be limited to its construction operations. The CONTRACTOR will arrange for storage of materials and a copy of an agreement for use of other property shall be furnished to the ENGINEER.

1.9 PRE-CONSTRUCTION CONFERENCE

A. After the award of Contract, a Pre-construction Work Conference will be held between the CONTRACTOR, the ENGINEER, the CITY, other interested Agencies, representatives of Utility Companies and others affected by the work.

The ENGINEER will set the time and place of this conference. The CONTRACTOR shall bring to the conference a copy of the proposed work schedule for the approval by the ENGINEER of the proposed methods and manner of executing the work including sequences of operation and time schedule. The work shall be performed in accordance with such schedule or approved amendments thereto.

1.10 UTILITY LOCATIONS

- A. As far as possible, all existing utility lines in the project area have been shown on the plans. However, the CITY does not guarantee that all lines are shown, or that said lines are in their true location. It shall be the CONTRACTOR'S responsibility to identify and locate all underground or overhead utility lines or equipment affected by the project. No additional payment will be made to the CONTRACTOR because of discrepancies in actual and plan location of utilities and damages suffered as a result thereof.
- B. The CONTRACTOR shall notify each utility company involved at least thirty (30) days prior to the start of construction to arrange for positive underground location, relocation or support of its utility where that utility may be in conflict with or endangered by the proposed construction. The CONTRACTOR shall pay for relocation of water mains or other utilities for the convenience of the CONTRACTOR. The CONTRACTOR shall pay for all charges by utility companies for temporary support of its utilities. All costs of permanent utility relocations to avoid conflict shall be the responsibility of the CONTRACTOR and the utility company involved.
- C. The CONTRACTOR shall schedule and coordinate their work in such a manner that they are not delayed by the utility companies relocating or supporting their utilities. No compensation will be paid to the CONTRACTOR for any loss of time or delay.
- D. All overhead, surface, and underground structures and/or utilities encountered are to be carefully protected from damage or displacement. All damage to said structures and/or utilities is to be completely repaired within a reasonable time; needless delay will not be tolerated. The CITY reserves the right to remedy any damage by ordering outside parties to make repairs at the expense of the CONTRACTOR. All repairs made by the CONTRACTOR are to be made to the satisfaction of the utility owner and shall be inspected by a representative of the utility owner and the ENGINEER.
- E. The CONTRACTOR should be aware of the Sunshine State One Call Center, which has a free locating service for CONTRACTORS and excavators. Within forty-eight hours before excavating, dial toll free 1-800-432-4770, and a locator will be dispatched to the work location. CONTRACTOR shall reasonably notify other utility companies not notified by Sunshine State One Call Center.
- F. The permits listed below will be obtained for the project by the CITY prior to beginning construction. The CONTRACTOR is responsible for compliance with any and all permit conditions. In the event that the CITY must obtain permits in addition to those listed below, the CONTRACTOR shall not have any claim for damages arising from any delay caused by the CITY'S obtaining said

SUMMARY OF WORK

PROJECT 12166

additional permits.

- a. BCPGMD : Surface Water License.
- G. Permits to be obtained by the CONTRACTOR include, but are not limited to the following:
 - a. Local, County, and State contracting licenses.
 - b. BCEPGMD: Dewatering permit, including NPDES permit if required.
 - a. MOT from Broward County for Broward Boulevard/SE 1st Street intersection, MOT from City of Fort Lauderdale for SE 1st Avenue/SE 1st Street intersection and MOT from City of Fort Lauderdale for SE 1st Avenue.
 - b. Contractor's Erosion Control Plan
 - c. Stormwater Pollution Prevention Plan

1.11 LINE AND GRADE

A. The ENGINEER has provided vertical and horizontal control for layout of the work in the form of benchmarks and reference points located adjacent to the work. From these controls provided, the CONTRACTOR shall develop and make all detailed surveys needed for construction as-built purposes and shall establish all working points, lines and elevations necessary to perform the work. A Professional Land Surveyor registered in the State of Florida shall supervise this surveying work.

1.12 PROTECTION AND RESTORATION OF SURVEY MONUMENTS

A. The CONTRACTOR shall carefully protect from disturbance all survey monuments, stakes and bench marks, whether or not established by CONTRACTOR, and shall not remove or destroy any surveying point until it has been properly witnessed by the ENGINEER. All major survey monuments that have been damaged by the CONTRACTOR such as section corners, 1/4 section corners; property corners or block control points shall be replaced at the CONTRACTOR'S expense with markers of a size and type approved by the ENGINEER. The replacement shall be under the supervision of a Florida Registered Land Surveyor where directed by the ENGINEER.

1.13 EQUIPMENT

A. All equipment necessary and required for the proper construction of all facilities shall be on the construction site, in first-class working condition.

1.14 STORAGE SITES

A. The CONTRACTOR shall furnish, at CONTRACTOR's expense, properly zoned areas suitable for field office, material storage and equipment service and storage. No material may be stored in the public right of way without prior authorization by the agency having jurisdiction. The CONTRACTOR shall keep these areas in a clean and orderly condition so as not to cause a nuisance or sight obstruction to motorists or pedestrians.

SUMMARY OF WORK

1.15 OWNERSHIP OF EXISTING MATERIALS

A. All materials removed or excavated from the job site shall remain the property of the CITY until released by the Contract Administrator, at which time it shall become the property of the CONTRACTOR, who shall dispose of it in a manner satisfactory to the ENGINEER.

1.16 EXCESS MATERIAL

A. Upon direction of the ENGINEER, all vegetation, debris, concrete or other unsuitable materials shall be disposed of in areas provided by the CONTRACTOR and approved by the ENGINEER. Any excess material desired to be retained by the CITY shall be delivered by the CONTRACTOR to a designated area within a 5-mile radius of the project, at no extra cost to the CITY.

1.17 AUDIO-VISUAL PRECONSTRUCTION RECORD

A. General

- a. The CONTRACTOR shall engage the services of a professional electrographer. A responsible commercial firm known to be skilled and regularly engaged in the business of preconstruction color audio-video documentation shall prepare the color audio-video dvd's. The electrographer shall furnish to the ENGINEER a list of all equipment to be used for the audio-video recording i.e., manufacturer's name, model number, specifications and other pertinent information. Additional information to be furnished by the electrographer are the names and addresses of two references that the electrographer has performed color audio-video recording for on projects of a similar nature within the last 12 months.
- b. Prior to beginning the work, the CONTRACTOR shall have a continuous color audio-video recording taken along the entire length of the project to serve as a record of preconstruction conditions. No construction shall begin prior to review and approval of the video covering the construction area by the ENGINEER. The ENGINEER shall have the authority to reject all or any portion of the videos not conforming to the specifications and order that it be redone at no additional charge. The CONTRACTOR shall reschedule unacceptable coverage within five days after being notified. The ENGINEER shall designate those areas, if any, to be omitted from or added to the audio-video coverage.

B. Digital Video Disk (DVD):

a. DVD's shall be new. Reprocessed dvd's will not be acceptable. They shall be interchangeable with the color dvd player and shall be compatible for playback with a standard player-receiver, DVD format. Any other format must be approved by ENGINEER.

PROJECT 12166

b. CONTRACTOR shall provide the ENGINEER and the CITY with one complete set of dvd's for the project area.

1.21 ENVIRONMENTAL PROTECTION

A. The CONTRACTOR shall furnish all labor and equipment and perform all work required for the prevention of environmental pollution during and as a result of the work under this contract. For the purpose of this contract, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, land and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as other pollutants. Environmental pollution prevention shall be in accordance with NPDES requirements with no additional cost to the CITY.

1.22 MAINTENANCE AND PROTECTION OF TRAFFIC

- A. The CONTRACTOR shall provide all necessary traffic control devices in order to redirect, protect, warn or maintain existing vehicular and pedestrian traffic during the course of construction.
 - a. Construction Phasing Requirements
 - Contractor shall arrange the schedule to close southbound and northbound traffic separately in phases to maintain minimum of 11' travel lane for each direction at all time.

B. TRAFFIC CONTROL

- a. The CONTRACTOR is required to submit a conceptual Traffic Control Plan at the Pre-Construction Conference. This preliminary plan should identify the phases of construction that the CONTRACTOR plans to proceed with and identify traffic flows during each phase. The ENGINEER will have ten (10) days to notify the CONTRACTOR of any comments. Once the conceptual plan for maintaining traffic has been approved, the CONTRACTOR will be required to submit a detailed plan showing each phase's Maintenance and Protection Plan prior to starting construction of any phase.
- b. The "Maintenance of Traffic" plan shall include pedestrian traffic as well as vehicular traffic. It shall be the responsibility of the CONTRACTOR for any necessary Construction, Pavement Marking and Signage or any Pedestrian Signalization and/or Signal Modification to accommodate an alternate safe walk route.
- c. The CONTRACTOR, at all times, shall conduct the work in such a manner as to insure the least obstruction to traffic as is practical. Convenience of the general public and of the residents adjacent to the

PROJECT 12166

work shall be provided for in a satisfactory manner, as determined by the ENGINEER.

- d. Sidewalks, gutters, drains, fire hydrants and private drives shall, insofar as practical, be kept in condition for their intended uses. Fire hydrants on or adjacent to the work shall be kept accessible to fire apparatus at all times, and no material or obstruction shall be placed within twenty (20) feet of any such hydrant.
- e. All existing stop and street name signs will be maintained as long as deemed necessary by the ENGINEER.
- f. The CONTRACTOR shall furnish a sufficient number of protective devices to protect and divert the vehicular and pedestrian traffic from working areas closed to traffic, or to protect any new work. Failure to comply with this requirement will result in the ENGINEER shutting down the work until the CONTRACTOR provides the necessary protection.
- g. Any time traffic is diverted for a period of time that will exceed onework day temporary pavement markings will be required. Existing pavement markings that conflict with the new work zone traffic pattern must be obliterated. Painting over existing pavement markings (black out) is not permitted.

1.23 MAINTENANCE AND PROTECTION OF EXISTING DRAINAGE SYSTEM

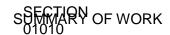
A. It shall be the responsibility of the contractor to maintain positive drainage on the surface and to ensure that the existing underground drainage system continues to function as intended during the construction. The contractor shall follow the plans to ensure that existing catch basins and manholes are being protected during the entire phase of construction.

1.24 APPLICATION FOR PAYMENT FOR STORED MATERIALS

A. Application for payment for stored materials may not be made by the CONTRACTOR.

1.25 SPECIAL CONDITIONS FOR CONSTRUCTION BY OTHER AGENCIES

- A. It will be the CONTRACTOR'S responsibility to coordinate construction schedules with other contractors so as to minimize disruptions, and inconveniences. The project site shall be safe at all times for construction workers and marina visitors.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)



SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUBMITTALS

- A. See Section 01340, Submittal Procedures, and all other references to document submittals. Submittals shall include, but are not limited to:
 - a. Schedule of Values: Submit schedule on OWNER's form.
 - b. Application for Payment.
 - c. Final Application for Payment.

1.2 SCHEDULE OF VALUES

- A. Prepare a schedule of values for the Work.
- B. Unit Price Work: Reflect unit price quantity and price breakdown from conformed Bid Form.
- C. Lump Sum Work:
 - 1. Reflect schedule of values format included in conformed Bid Form.
 - 2. List Bonds and insurance premiums, mobilization, demobilization, facility startup, and contract closeout separately.
 - 3. Break down by Divisions 2 through 16 with appropriate subdivision of each Specification.
- D. An unbalanced or front-end loaded schedule will not be acceptable.
- E. Summation of the complete schedule of values representing all the Work shall equal the Contract Price.

1.3 APPLICATION FOR PAYMENT

- A. <u>Transmittal Summary Form</u>: Attach one Summary Form with each detailed Application for Payment and include Request for Payment of Materials and Equipment on Hand as applicable. Execute certification by authorized officer of CONTRACTOR.
- B. Use detailed Application for Payment Form provided by OWNER.
- C. Include accepted schedule of values for each portion of Work and the unit price breakdown for the Work to be paid on unit price basis, and a listing of OWNER- selected equipment, if applicable, and allowances, as appropriate.

D. Preparation:

- a. Round values to nearest dollar.
- b. List each Change Order and Written Amendment executed prior to date of submission as separate line item. Totals to equal those shown on the Transmittal Summary Form.
- c. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form, a listing of materials on hand as applicable, and such supporting data as may be requested by OWNER.

1.4 MEASUREMENT - GENERAL

- A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and Specifications as specified in National Institute of Standards and Technology, Handbook 44.
- B. Whenever pay quantities of material are determined by weight, material shall be weighed on scales furnished by CONTRACTOR and certified accurate by state agency responsible. Weight or load slip shall be obtained from weigher and delivered to CONSTRUCTION MANAGER or OWNER's representative at point of delivery of material.
- C. If material is shipped by rail, car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff, and provided further that car weights will not be acceptable for material to be passed through mixing plants.
- D. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by CONSTRUCTION MANAGER. Each vehicle shall bear a plainly legible identification mark.
- E. Materials that are specified for measurement by the cubic yard measured in the vehicle shall be hauled in vehicles of such type and size that actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its water level capacity. Vehicles shall be loaded to at least their water level capacity. Loads hauled in vehicles not meeting above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to rejection, and no compensation will be allowed for such material.
- F. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings. Variations of 1 foot or less will be ignored, and profiles shown on Drawings will be used for determining quantities.

PROJECT 12166

G. Units of measure shown on Bid Form shall be as follows, unless specified otherwise. All methods of measurement shall be approved by the CONSTRUCTION MANAGER.

ltem	Method of Measurement
AC	Acre - Field Measure
CY	Cubic Yard - Field Measure within limits specified or shown, or
	measured in vehicle by volume, as specified
EA	Each - Field Count
GAL	Gallon - Field Measure
HR	Hour
LB	Pound(s) - Weight Measure by Scale
LF	Linear Foot - Field Measure
LS	Lump Sum - Unit is one; no measurement will be made
SF	Square Foot
SY	Square Yard
TON	Ton - Weight Measure by Scale (2,000 pounds)

1.5 PAYMENT

A. General:

- a. Progress payments will be made monthly.
- b. The date for CONTRACTOR's submission of monthly Application for Payment.

1.6 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- A. Payment will not be made for following:
 - a. Loading, hauling, and disposing of rejected or unused material.
 - b. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
 - c. Rejected loads of material, including material rejected after it has been placed by reason of failure of CONTRACTOR to conform to provisions of Contract Documents.
 - d. Material not unloaded from transporting vehicle.
 - e. Defective Work not accepted by OWNER.
 - f. Material remaining on hand after completion of Work.

1.7 MOBILIZATION

A. See Section 01505, Mobilization, for payment limitations. All environmental compliance matters except for erosion control system shall be included in Mobilization.

PROJECT 12166

B. Payment for mobilization will be made at an allowance price named in the Bid Schedule. Payment for mobilization will be made in equal monthly amounts during the duration of the original contract time.

1.8 MAINTENANCE OF TRAFFIC (M.O.T.)

- A. See Section 01570, Traffic Regulations, and all other references to traffic control and maintenance, as well as parking control and maintenance in this document and any regulatory requirements.
- B. Payment for maintenance of traffic will be made at an allowance price named in the Bid Schedule. Payment for maintenance of traffic and parking activities will be made in equal monthly amounts during the duration of the original contract time.

1.9 HARDSCAPE DEMOLITION

- A. Measurement for payment to remove and dispose of existing hardscape elements will be based on a lump sum inclusive of all work on the Demolition drawings.
- B. This lump sum for removal and disposal of existing hardscape elements as indicated on the Design Drawings shall constitute full compensation for the removal and disposal of all concrete, asphalt or structures. This includes, but is not limited to sidewalks, curbs, aprons, concrete collars, brick pavers, and all other miscellaneous concrete as directed by the ENGINEER. Existing structures will not be compensated under this line item.

1.10 PAVING AND DRAINAGE

- A. Measurement for payment to furnish and install drainage structures, inlets or top slabs, connections, and paving in addition to all required connections, modifications and cleaning of drainage facilities will be based on the line items provided for each item of work for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing, modifying or cleaning all drainage appurtenances in the design drawings which price shall constitute full compensation for the completed installation of the structure including but not limited to excavation, backfill, compaction, modifications, disposal, cleaning, all required dewatering and full compliance with the Trench Safety Act.

1.11 WATER AND SEWER

- A. Measurement for payment to furnish and install all water and sewer items will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all water and sewer items shall constitute full compensation for the completed installation of the structure including but not

PROJECT 12166

limited to excavation, backfill, compaction, modifications, disposal, cleaning, all required dewatering and full compliance with the Trench Safety Act.

1.12 STRUCTURES

- A. Measurement for payment to furnish and install all shade structures and other structures, will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing shade structures and other structures shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.13 AMENITIES

- A. Measurement for payment to furnish and install all amenities will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all amenities shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.14 LANDSCAPING

- A. Measurement for payment to furnish and install trees, sod, groundcover and irrigations will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all trees, sod, groundcover and irrigations, shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.15 ELECTRICAL

- A. Measurement for payment to furnish and install all electrical equipment and conduits will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all electrical equipment and conduits shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.16 PERMIT FEES

A. Measurement for payment for permit fees will be based upon the actual permit fees required by the CONTRACTOR from the various agencies having

PROJECT 12166

jurisdiction for construction of the project, all in accordance with the Contract Documents. The allowance for permit fee amounts shown on the bid schedule is an estimate of permit fees required for the project and is a cost pass through item. The permit fees are based on allowances and OWNER will reconcile the actual cost with the CONTRACTOR by change order. The CONTRACTOR shall produce documentation upon request verifying actual cost. Only permit fees substantiated and approved by the ENGINEER will be paid as part of this bid item.

B. Because payment for permit fees will be paid as part of this bid item, payment for permit fees will not be paid as part of mobilization.

1.17 CONSIDERATION FOR INDEMNIFICATION (OWNER/ENGINEER)

- A. Measurement for payment for indemnification of the OWNER and ENGINEER will be based upon the sum named for such work, all in accordance with the requirements of the contract documents.
- B. Payment will be twenty-five dollars for consideration for indemnification named in the bid schedule and shall constitute full compensation for indemnifying the OWNER and ENGINEER as specified in the contract documents.

1.18 ALLOWANCE FOR FPL/COMCAST/AT&T

- A. Not applicable for this project.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01031 – ALTERATION PROJECT PROCEDURES

PART 1 GENERAL

1.1 REQUIREMENTS

- A. Coordinate work of trades and schedule elements of alterations and renovation work by procedure and methods to expedite completion of the work.
- B. In addition to demolition and that specifically shown, cut, move or remove items necessary to provide access or to allow alterations and new work to proceed. Include such items as:
 - a. Repair or removal of hazardous or unsanitary conditions.
 - b. Removal of abandoned items and items serving no useful purpose, such as abandoned piping, conduit and wiring.
 - c. Removal of unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, rusted metals and deteriorated concrete, shall be removed from the site expeditiously.
 - d. Cleaning of surfaces and removal of surface finished as needed to install new work and finishes.
 - e. Protection as required for existing trees to remain.
 - f. For purposes of all existing underground utilities work, coordinate as required by use of special telephone number shown on engineering drawings.
 - g. Site storage for all existing benches, signals, signs, light poles, fire hydrants, manhole covers and grates to be relocated.
- C. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a professional transition to adjacent new items of construction.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 ALTERATIONS, CUTTING AND PROTECTION

A. Assign the work of moving, removal, cutting, patching and protection to trades qualified to perform the work in a manner to cause least damage to each type of work, and provide means of returning surfaces to appearance of new work.

- B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.
 - Cut finish surfaces such as paving, masonry, tile, plaster or metals, by methods to terminate surfaces in a straight line at a natural point of division.
- C. Perform cutting and patching as specified in Section 01045.
- D. Protect existing finishes, equipment, and adjacent work which are scheduled to remain, from damage.
 - a. Protect existing and new work from weather and extremes of temperature.

PART 2 PRODUCTS

2.1 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING

- A. General Requirements that work be complete:
 - a. Provide same products or types of construction as that in existing structure, as needed to patch, extend or match existing work.
 - Generally Contract Documents will not define products or standards of working conduct present in existing construction; CONTRACTOR shall determine products in inspection and any necessary testing by use of the existing as a sample of comparison.
 - b. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed as necessary to make work complete and consistent to existing identical standards of quality.

PART 3 EXECUTION

3.1 PERFORMANCE

A. Patch and extend existing work using skilled mechanics who are capable of matching existing quality. Quality of patched or extended work shall be not less than that specified for new work.

3.2 DAMAGED SURFACES

- A. Patch and replace any portion of an existing finished surface with the exception of concrete curb or gutter which is found to be damaged, lifted, discolored, or shows other imperfections. Damaged curbing shall be replaced in sections as directed by the engineer.
 - a. Provide adequate support of substrate prior to patching the finish.

- b. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.
- c. When existing surface finish cannot be matched, refinish entire surface to nearest intersections.

3.3 TRANSITION FROM EXISTING TO NEW WORK

- A. When new work abuts or is finished flush with existing work, make a smooth transition. Patched work shall match existing adjacent work in texture and appearance so that the patch of transition is invisible at a distance of five feet.
 - a. When finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

3.4 CLEANING

- A. Perform periodic and final cleaning as specified in Section 01710.
 - a. Clean OWNER occupied areas daily.
 - b. Clean spillage, overspray, and heavy collection of dust in OWNER occupied areas immediately.
- B. At completion of work of each trade, clean area and make surfaces ready for work of successive trades.
- C. At completion of alterations work in each area, provide final cleaning and return space to a condition suitable for use by OWNER.

3.5 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work in this section. Payment for work shall be included in all other work.

SECTION 01040 - COORDINATION

PART 1 GENERAL

1.1 SUBMITTALS

- A. Informational
 - a. Statement of Qualification (SOQ) for land surveyor or civil engineer.
 - b. Statement of Qualification (SOQ) for professional videographer.
- B. Photographs
 - a. Color Prints
 - i. Submit two copies, accompanied by negatives or digital files, within 5 days of being taken.
 - b. Video Recordings
 - i. Submit two copies within 5 days of being taken.

1.2 UTILITY NOTIFICATION AND COORDINATION

- A. Coordinate the Work with various utilities within Project limits. Notify applicable utilities prior to commencing Work.
- B. Contact the City of Fort Lauderdale Public Services Department at 954-828-8000 for water and sewer utility locations.
- C. Contact Sunshine State One Call at 1-800-432-4770 at least 2 business days prior to any excavation.
- D. If damage occurs, or if conflicts or emergencies arise during Work, contact the appropriate utility.
 - a. Electricity Company: Florida Power and Light.
 - Contact Person: Trouble Center (or police/fire 911).
 - Telephone: 954-797-5000.
 - b. Telephone Company: Bell South.
 - Contact Person: Jason Boschen.
 - Telephone: 954-316-4005 or 954-605-1121.
 - c. Water and Sewer Department: Fort Lauderdale Public Services Department.
 - Contact Person: Emergency Hotline.
 - Telephone: 954-828-8000.
 - d. Gas Company: TECO Peoples Gas.

Exhibit 1

Page 124 of 409

PROJECT 12166

- Contact Person: Dispatch.
- Telephone: 305-957-3857, ext. 7490 or 1-877-832-6747.
- e. Telecom: AT&T Broadband/Comcast.
 - Contact: Andy Vaspasiano.
 - Telephone: 954-266-6589 or 954-444-2833.
- f. Telecom: FP&L FiberNet.
 - Contact: Noel R. Reese.
 - Telephone: 305-552-3249 or 305-205-1283.
- g. Broward County Traffic Engineering Division (For Traffic Signal Communications Systems Underground Cable and Traffic Loops):
 - Contact: Keith Smith.
 - Telephone: 954-484-9600, ext. 227.

1.3 PROJECT MEETINGS

A. General

- a. Contract: Schedule physical arrangements for meetings throughout progress of Work, prepare meeting agenda with City/Construction Manager and Contractor input and distribute with written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions, and reproduce and distribute copies minutes after each meeting to participants and parties affected by meeting decisions.
- b. Representatives of City/Construction Manager, Contractor, and Subcontractors shall attend meetings as needed.

B. Preconstruction Conference

- Contractor shall be prepared to discuss the following subjects, as a minimum:
 - i. Required schedules.
 - ii. Status of Bonds and insurance.
 - iii. Sequence of critical path work items.
 - iv. Project changes and clarification procedures.
 - v. Use of site, access, office and storage areas, security and temporary facilities.
 - vi. Major project delivery and priorities.
 - vii. Contractor's safety plan and representative.
 - viii. Progress payment procedures.

Page 125 of 409

- ii. Attendees may include but not limited to:
 - i. City's representatives
 - ii. Contractor's office representative
 - iii. Contractor's resident superintendent
 - iv. Contractor's quality control representative
 - v. Subcontractor's representatives whom Contractor may desire or City may request to attend.
 - vi. Engineer's representatives.
 - vii. Others as appropriate.
 - c. Preliminary Schedules Acceptability Review Meeting: As required to review and finalize Preliminary Schedule.

C. Progress Meetings

- a. Contactor will schedule regular progress meetings at site, conducted weekly to review Work progress, progress schedule, Shop Drawing and Sample submissions schedule, Application for Payment, contract modifications, and other matters needing discussion and resolution.
- b. Attendees will include
 - i. City's representatives, as appropriate.
 - ii. Contractor, Subcontractors and Suppliers, as appropriate.
 - iii. Others as appropriate.
- c. On a monthly basis, the will conduct a meeting to review work completed the previous month versus the Progress Schedule, work planned for upcoming month based on the Progress Schedule, the monthly Application for Payment, and any outstanding issues related to performance of the Work including pending contract modifications, requests for clarification, Shop Drawings, etc. All parties will attend the monthly meeting.
- D. Pre-installation Meetings
 - a. When required in individual Specification sections or as necessary to coordinate the Work, convene at site prior to commencing Work of that section.
 - b. Require attendance of entities directly affecting, or affected by, Work of

Page 126 of 409

that section.

- c. Notify City/Construction Manager 4 days in advance of meeting date.
- d. Provide suggested agenda to City/Construction Manager to include reviewing conditions of installation, preparation and installation or application procedures, and coordination with related Work and work of others.

E. Other Meetings

a. In accordance with the Contract Documents and as may be required by the City and Engineer.

1.4 FACILITY OPERATIONS

- A. Continuous operation of City's facilities is of critical importance. Schedule and conduct activities to enable existing facilities to operate continuously, unless otherwise specified.
- B. Perform Work continuously during critical connections and changeovers, and as required to prevent interruption of City's operations.
- C. When necessary, plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items to maintain continuous operations of City's facilities.
- D. Do not close lines, open or close valves, or take other action which would affect the operation of existing systems, except as specifically required by the Contract Documents and after authorization by City and Engineer. Such authorization will be considered within 48 hours after receipt of Contractor's written request.
- E. Provide **7** days advance written request for approval of need to shut down a process or facility to City/Construction Manager.
- F. Power outages will be considered upon 48 hours written request to City. Describe the reason, anticipated length of time, and areas affected by the outage. Provide temporary provisions for continuous power supply to critical facility components.
- G. Do not proceed with Work affecting a facility's operation without obtaining City's advance approval of the need for and duration of such Work.
- H. Relocation of Existing Facilities:
 - a. During construction, it is expected that minor relocations of Work will be necessary.
 - b. If Contractor determines that in order to expedite construction of new water and or sewer mains it would be necessary to temporarily remove and replace existing water services and/or sewer service connections, he will be responsible for the removal and replacement of such service

connections at his own cost and effort. The City will not provide additional compensation for any costs associated with such effort. All labor and material costs associated with means and methods of construction will be compensated as part of the bid item(s) cost submitted by the Contractor. Additionally, the Contractor will have to coordinate and inform utility owner(s) and any City resident(s) impacted by such activities and must repair such utilities in a timely manner to minimize disruption of service.

- c. Provide complete relocation of existing structures and Underground Facilities, including piping, utilities, equipment, structures, electrical conduit wiring, electrical duct bank, traffic loop detectors and other necessary items.
- d. Use only new materials for relocated facility. Match materials of existing facility, unless otherwise shown or specified.
- e. Perform relocations to minimize downtime of existing facilities.
- f. Install new portions of existing facilities in their relocated position prior to removal of existing facilities, unless otherwise accepted by City.

1.5 BYPASS PUMPING

- Where the Work includes connections or modifications to existing sanitary Α. sewer systems, wastewater flows shall be controlled through the pipeline sections and pump stations where work is being performed. Under no circumstances, can portions of the system be removed from service for periods of time in excess of that approved by the City. The Contractor shall be responsible to assess conditions and capacities of the existing sewer lines and pump stations in order to implement an acceptable bypass plan at no additional cost to the City. Bypass pumping will be required for all sewers and pump station construction that would result in shutdown of existing facilities. The Contractor shall supply the necessary pumps, conduits, and other equipment to not only divert flow around the pump station, manhole, or pipe section in which work is to be performed, but also to transmit the flow in downstream sewer lines and/or pump stations without surcharge. The bypass systems shall be of sufficient capacity to handle existing flows plus additional flows that may occur during periods of high tide or rainfall. Emergency backup pumping capability must be available in addition to the primary bypass system. The Contractor will be responsible for furnishing the necessary labor, power, and supervision to set up and operate the pumping and bypass systems. When pumping is in operation, all engines shall be equipped in a manner to keep the pump noise to a minimum and to comply with applicable noise ordinances.
- B. Contractor shall be responsible for any damage to properties or buildings connected to the sewer system, and to the pipeline, which result from the flow control activities.
- C. Contractor shall submit a bypass pumping plan for all proposed bypass pumping operations.

COORDINATION

01040-5 CAM # 19-0474 Exhibit 1 Page 128 of 409

PROJECT 12166

1.6 PHYSICAL CONDITIONS

- A. Exercise reasonable care to verify locations of existing subsurface structures and underground facilities.
- B. Thoroughly check immediate and adjacent areas subject to excavation by visual examination (and by electronic metal and pipe detection equipment, as necessary) for indications of subsurface structures and underground facilities.
- C. Make exploratory excavations where existing underground facilities or structures may potentially conflict with proposed underground facilities or structures. Conduct exploratory excavations in presence of Engineer and sufficiently ahead of construction to avoid possible delays to Contractor's Work.

1.7 ADJACENT FACILITIES AND PROPERTIES

A. Examination

- a. After Effective Date of the Agreement and before Work at site is started, Contractor, City/Construction Manager, and affected property owners and utility owners shall make a thorough examination of pre-existing conditions including existing buildings, structures, and other improvements in vicinity of Work, as applicable, which could be damaged by construction operations.
- b. Periodic reexamination shall be jointly performed to include, but not limited to, cracks in structures, settlement, leakage, and similar conditions.

B. Documentation

- a. Record and submit documentation of observations made on examination inspections in accordance with paragraphs Construction Photographs and Audio-Video Recordings.
- b. Upon receipt, Engineer will review, sign, and return one record copy of documentation to Contractor to be kept on file in field office.
- c. Such documentation shall be used as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and is for the protection of adjacent property owners, Contractor, and City.

1.8 CONSTRUCTION PHOTOGRAPHS

- A. Photographically document all unique portions of the construction including tieins to existing pipelines or facilities, crossings of existing utilities, buried valve and piping intersections, and other work items that will not otherwise be visible after completion of construction.
- B. Film or file handling and development shall be done by a commercial laboratory.
- C. City and Engineer shall have the right to select the subject matter and vantage

COORDINATION

PROJECT 12166

point from which photographs are to be taken.

D. Construction Progress Photos

- a. Photographically demonstrate progress of construction, showing every aspect of site and adjacent properties as well as interior and exterior of new or impacted structures.
- b. Monthly: Take 24 exposures using 35 mm color film or digital photographs of comparable quality, unless otherwise approved by the PCM.

E. Color Prints

- a. Minimum Size: 3-inch by 5-inch.
- b. Finish: Glossy.
- c. Label Each Print:
 - i. Project Name.
 - ii. Date and time photo was taken.
 - iii. Photographer's name.
 - iv. Caption (maximum 30 characters).
 - v. Location and area designation.
 - vi. Schedule activity number, as appropriate.
- d. Assemble in bound albums in clear plastic sleeves that facilitate viewing both front and back of each photograph.
- e. Assemble negatives in their corresponding album in clear plastic sleeves made for the purpose or on recordable CD media organized by project seament.

1.9 AUDIO-VIDEO RECORDINGS

- A. Prior to beginning Work on construction site or of a particular area of the Work, and again within 10 days following date of Substantial Completion, videograph construction site and property adjacent to construction site.
- B. In the case of preconstruction recording, no Work shall begin in the area prior to City/Construction Manager's review and approval of content and quality of video for that area.
- C. Particular emphasis shall be directed to physical condition of existing vegetation, structures, and pavements within pipeline alignment and areas adjacent to and within the right-of-way or easement, and on Contractor storage and staging areas.

- D. City/Construction Manager and Engineer shall have right to select subject matter and vantage point from which videos are to be taken.
- E. Videotaping shall be by a professional commercial videographer, experienced in shooting construction videos.
- F. Video Format and Quality
 - a. DVD format, with sound.
 - b. Video
 - i. Produce bright, sharp, and clear images with accurate colors, free of distortion and other forms of picture imperfections.
 - ii. Electronically, and accurately display the month, day, year, and time of day of the recording.
 - c. Audio
 - i. Audio documentation shall be done clearly, precisely, and at a moderate pace.
 - ii. Indicate date, Project name, and a brief description of the location of taping, including
 - a. Facility name;
 - b. Street names or easements:
 - c. Addresses of private property; and
 - d. Direction of coverage, including engineering stationing, if applicable.
- G. Documentation
 - a. Provide two copies to the City.
 - b. DVD Label:
 - i. DVD number (numbered sequentially, beginning with 001).
 - ii. Project Name.
 - iii. Name of street(s) or easement(s) included.
 - iv. Applicable location by engineering stationing.
 - v. Date and time of coverage.

- c. Project DVD Log: Maintain an ongoing log that incorporates above noted label information for DVD'S on Project.
- H. The Following Shall be Included with the Video Documentation
 - a. Coverage is required within and adjacent to the rights-of-way, easements, storage, and staging areas where the work is being constructed.
 - b. Documentation of the conditions of the adjacent properties or any affected structures as a result of the impending construction.
 - c. Certification as to date work done and by whom.
 - d. All videos shall be keyed to the construction drawings, provided with an index and a written narrative.
- I. Preconstruction and Post-Construction Videos Shall be Submitted as follows:
 - a. Preconstruction videos shall be presented to the City at the preconstruction conference.
 - b. Post-construction videos shall be submitted prior to final project closeout. This submittal is contingent to final payment.
- J. Payment for the work in this Section will be included as part of the lump sum price for mobilization/demobilization.

1.10 REFERENCE POINTS, SURVEYS, AND RECORD DRAWINGS

- A. Location and elevation of benchmarks are shown on Drawings.
- B. Contractor's Responsibilities:
 - a. Provide all survey efforts required to layout the Work.
 - b. Check and establish exact location of existing facilities prior to construction of new facilities and any connections thereto.
 - c. In event of discrepancy in data or benchmarks, request clarification before proceeding with Work.
 - d. Retain a professional land surveyor or civil engineer registered in the State of Florida who shall perform or supervise all surveying necessary for construction staking and layout and obtaining record information for as-built and record drawing preparation.
 - e. Maintain complete accurate log of survey Work as it progresses as a Record Document. The Contractor is responsible for the quality control of horizontal location and vertical elevations of the installed project.
 - f. On request of City/Construction Manager, submit documentation.

- g. Provide competent employee(s), tools, stakes, and other equipment and materials as City/Construction Manager may require to:
 - i. Establish control points, lines, and easement boundaries.
 - ii. Check layout, survey, and measurement Work performed by others.
 - iii. Measure quantities for payment purposes.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

- 3.1 CUTTING, FITTING, AND PATCHING
 - A. Cut, fit, adjust, or patch Work and work of others, including excavation and backfill as required, to make Work complete.
 - B. Obtain prior written authorization of Engineer before commencing Work to cut or otherwise alter:
 - a. Structural or reinforcing steel, structural column or beam, elevated slab, trusses, or other structural member.
 - b. Weather or moisture-resistant elements.
 - c. Efficiency, maintenance, or safety of element.
 - d. Work of others.
 - C. Refinish surfaces to provide an even finish.
 - a. Refinish continuous surfaces to nearest intersection.
 - b. Refinish entire assemblies.
 - c. Finish restored surfaces to such planes, shapes, and textures that no transition between existing work and Work is evident in finished surfaces.
 - i. Restore existing work, Underground Facilities, and surfaces that are to remain in completed Work including concrete-embedded piping, conduit, and other utilities as specified and as shown.
 - ii. Make restorations with new materials and appropriate methods as specified for new Work of similar nature; if not specified, use recommended practice of manufacturer or appropriate trade association.

SECTION 01045 - CUTTING AND PATCHING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the work or to:
 - a. Make its several parts fit together properly.
 - b. Uncover portions of the work to provide for installation of ill-timed work.
 - c. Remove and replace defective work.
 - d. Remove and replace work not conforming to requirements of Contract Documents.
 - e. Remove samples of installed work as specified for testing.
 - f. Provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 SUBMITTALS

- A. Submit a written request to ENGINEER well in advance of executing any cutting or alteration, which affects:
 - a. Work of the OWNER or any separate CONTRACTOR.
 - b. Structural value of integrity of any element of the project.
 - c. Integrity of effectiveness of weather-exposed or moisture-resistant elements or systems.
 - d. Efficiency, operational life, maintenance or safety of operational elements.
 - e. Visual qualities of sight-exposed elements.
- B. Request shall include:
 - a. Identification of the project.
 - b. Description of the affected work.

- c. The necessity for cutting, alteration or excavation.
- d. Effect on work of OWNER or any separate CONTRACTOR, or on structural or weatherproof integrity of project.
- e. Description of proposed work
 - i. Scope of cutting, patching, alteration, or excavation.
 - ii. Trades who will execute the work.
 - Products proposed to be used.
 - iv. Extent of refinishing to be done.
- f. Alternatives to cutting and patching.
- g. Cost proposal, when applicable.
- h. Written permission of any separate CONTRACTOR whose work will be affected.
- C. Should conditions of work or the schedule indicate a change of products from original installation, CONTRACTOR shall submit request for substitution as specified in Section 01600, paragraph 1.08.
- D. Submit written notice to ENGINEER designating the date and time the work will be uncovered.

PART 2 PRODUCTS

2.1 MATERIALS

A. Comply with specifications and standards for each specific product involved.

PART 3 EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering the work, inspect conditions affecting installation of products, or performance of work.
- C. Report unsatisfactory or questionable conditions affecting installation of products, or performance of work.

3.2 PREPARATION

A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of work.

- B. Provide devices and methods to protect other portions of project from damage.
- C. Provide protection from elements for that portion of the project, which may be exposed by cutting and patching, work, and maintain excavations free from water.

3.3 PERFORMANCE

- A. Execute cutting and demolition by methods, which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods, which will prevent settlement or damage to other work.
- C. Employ original Installer or Fabricator to perform cutting and patching for:
 - a. Weather-exposed or moisture-resistant elements.
 - b. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified product, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.
- F. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - a. For continuous surfaces, refinish to nearest intersection.
 - b. For an assembly, refinish entire unit.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the unit price bid of any item requiring cutting and patching, including payement restoration.

SECTION 01050 – PROJECT MANAGEMENT

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - a. Coordination Drawings.
 - Special Project Procedures
 - c. Administrative and supervisory personnel.
 - d. Project meetings.
 - e. Requests for Information (RFIs).
- B. Related Sections include the following:
 - a. Section 01200, "Project Meetings"
 - Section 01311, "Construction Progress Documentation"
 - c. Section 01340, "Submittal Procedures"
 - d. Section 01780, "Contract Closeout"

1.3 DEFINITIONS

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

1.4 COORDINATION

- A. <u>Coordination</u>. 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.
 - a. 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.

- Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
- c. Make adequate provisions to accommodate items scheduled for later installation.
- d. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Memoranda.

- a. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - i. Prepare similar memoranda for City and separate contractors if coordination of their Work is required.

C. Administrative Procedures

- a. Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - i. Preparation of Contractor's Construction Schedule.
 - ii. Preparation of the Schedule of Values.
 - iii. Installation and removal of temporary facilities and controls.
 - Delivery and processing of submittals.
 - v. Progress meetings.
 - vi. Project closeout activities.

1.5 SUBMITTALS

A. Key Personnel Names

- a. Within 5 days of notice to proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site including:
 - Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers.

Page 138 of 409

 Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.6 SPECIAL PROJECT PROCEDURES

A. Discrepancies, Errors

- a. Should discrepancies or errors appear in the drawings or specifications concerning materials, workmanship, or quantity of work to be performed, the Contractor will be required to immediately notify the City before proceeding with the work.
- b. If the Contractor fails to notify the City and proceeds with the work, Contractor will be required to correct the errors at his/her own expense. In the event of a conflict between the drawings and specifications, the City will decide on the way to perform the work or supply the materials.

B. Dimensions and Measurements

- a. The figured dimensions on the drawings or notes including dimensions shall be used for construction instead of measurements of the drawings by scale. No scale measurements shall be used as a dimension for construction.
- b. Dimensions on all drawings as well as the detail drawings themselves are subject in every case to measurements of adjacent or previously completed work. All such measurements necessary shall be taken before undertaking any work dependent upon such data.
- c. Field verification of dimensions on plans is mandatory since actual locations, distances, and levels will be governed by actual field conditions.

C. Discrepancies or Inconsistencies:

- a. Should any discrepancy or inconsistency appear between larger and smaller scale drawings in any of the divisions of the specifications or in any of the contract documents, such discrepancy shall be immediately submitted to the City for correction before proceeding with the work in question. In no case shall the Contractor make any alterations, erasures, changes or modifications in the drawings or specifications.
 - i. Should it appear that any of the work as specified or shown by the drawings is not sufficiently detailed or explained, the Contractor shall apply to the City for such further details or information as may be necessary for full understanding of the work in question.
 - ii. The data set forth in these specifications and indicated on the drawings are as accurate as can be obtained, but their extreme

accuracy is not guaranteed. Final application thereto shall be determined on the job as conditions may demand and subject to the approval of the City.

- D. Plans and Specifications Acknowledgment by Subcontractors and Suppliers
 - a. All Subcontractors and Suppliers must submit, through the General Contractor to the CONSULTANT ENGINEER and CITY's PROJECT MANAGER, a statement on their individual letterhead stationary, signed and sealed with their corporate seal, or a notarized statement on their letterhead stationery in the absence of a corporate seal, that the individual Subcontractor or Supplier:
 - i. Has received or reviewed a FULL set of approved plans and specifications for the project,
 - ii. Is aware that items concerning their particular trade may be shown and/or detailed in other trades or sections of the plans and specifications, and
 - iii. Will comply with said plans, specifications and all applicable codes and permit requirements.
- E. In the event a Subcontractor or Supplier notes a mistake or details appear incomplete, or if there are questions or concerns with the plans and specifications, the Subcontractor or Supplier will immediately notify the General Contractor. No work will proceed until such conflicts or questions are resolved in writing.
- F. The Subcontractor will not be permitted to start work, nor will any Shop drawings/submittals be accepted for review from a supplier until this letter of acknowledgment is received and approved by the General Contractor and CONSULTANT ENGINEER and CITY's PROJECT MANAGER. Also, the City will not process any pay request for the work of any Subcontractor or Supplier whose acknowledgment letter is not on file with the City.

1.7 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure

- a. Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
 - i. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 - ii. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI

PROJECT 12166

- a. Include a detailed, legible description of item needing interpretation and the following:
 - i. City Project Number
 - ii. City Project Name.
 - iii. Date.
 - iv. Name of Contractor.
 - v. RFI number, numbered sequentially.
 - vi. Specification Section number and title and related paragraphs, as appropriate.
 - vii. Drawing number and detail references, as appropriate.
 - viii. Field dimensions and conditions, as appropriate.
 - ix. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 - Contractor's signature.
 - xi. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
 - xii. Identify each page of attachments with the RFI number and sequential page number.

C. Software-Generated RFIs

- a. Software-generated form with substantially the same content as indicated above.
 - Word Template is available upon request from the CONSULTANT ENGINEER and CITY'S PROJECT MANAGER 'S Office.
 - ii. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. <u>Engineer's Action</u>. Engineer will review each RFI, determine action required,

PROJECT 12166

and return it. Allow seven working days for Engineer's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

- a. The following RFIs will be returned without action:
 - i. Requests for approval of submittals.
 - ii. Requests for approval of substitutions.
 - iii. Requests for coordination information already indicated in the Contract Documents.
 - iv. Requests for adjustments in the Contract Time or the Contract Sum.
 - v. Requests for interpretation of Engineer's actions on submittals.
 - Incomplete RFIs or RFIs with numerous errors.
- b. Engineer's action may include a request for additional information, in which case Engineer's time for response will start again.
- c. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within 10 days of receipt of the RFI response.
- E. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.
- F. RFI Log.
 - a. Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Include the following:
 - i. Project name.
 - ii. Name and address of Contractor.
 - iii. RFI number including RFIs that were dropped and not submitted.
 - iv. RFI description.
 - v. Date the RFI was submitted.

PROJECT 12166

- vi. Date Engineer's response was received.
- vii. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01060 – REGULATORY REQUIREMENTS & PERMITS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall comply with all building codes appropriate to the project, including those of:
 - a. National Electric Code.
 - b. Florida Building Code. (Latest Revision)
- B. CONTRACTOR shall comply with these codes, laws, regulations, rules, directives of all agencies, boards, districts, and governmental bodies having jurisdiction.
- C. CONTRACTOR shall obtain and pay the cost of all building permits, fees, tie-in or connection charges associated with the project.
- D. The CONTRACTOR shall obtain construction permits from Broward County Planning and Environmental Regulation Division license(s), Florida Department of Environmental Protection, Fort Lauderdale Building Department and file a NOI with FDEP for NPDES compliance. Fort Lauderdale Building Permit will be available for pickup by CONTRACTOR once Notice to Proceed has been granted.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 MEASUREMENT AND PAYMENT

- A. CONTRACTOR shall be reimbursed for permit fees as described in Section 01025.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01070 – ABBREVIATIONS OF INSTITUTIONS

PART 1 GENERAL

1.1 GENERAL

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

1.2 ABBREVIATIONS

AAMA Architectural Aluminum Manufacturer's Association

AAR Association of American Railroads

AASHTO American Association of State Highway and Transportation Officials

AATCC American Association of Textile Chemists and Colorists

ACI American Concrete Institute

AFBMA Anti-Friction Bearing Manufacturer's Association, Inc.

AGA American Gas Association

AGMA American Gear Manufacturers Association
AHAM Association of Home Appliance Manufacturers

Al The Asphalt Institute

AIA American Institute of Architects

AISC American Institute of Steel Construction

AISI American Iron and Steel Institute

AITC American Institute of Timber Construction
AMCA Air Moving and Conditioning Association

ANS American Nuclear Society

ANSI American National Standards Institute. Inc.

APA American Plywood Association
API American Petroleum Institute
APWA American Public Works Association
ASA American Standards Association

ASAE American Society of Agricultural Engineers

ASCE American Society of Civil Engineers

ASHRAE American Society of Heating, Refrigerating, and Air Conditioning

Engineers

ASLE American Society of Lubricating Engineers
ASME American Society of Mechanical Engineers
ASQC American Society for Quality Control
ASSE American Society of Sanitary Engineers
ASTM American Society for Testing and Materials
AWPA American Wood Preservers Association
AWPI American Wood Preservers Institute

AWS American Welding Society

AWWA American Water Works Association

BBC Basic Building Code, Building Officials & Code Administrators

Page 145 of 409

PROJECT 12166

International

BCPERD Broward County Planning and Environmental Regulation Division BCHCED Broward County Highway Construction and Engineering Division

BCHD Broward County Health Department

BCTED Broward County Traffic Engineering Division

BCWRMD Broward County Water Resource Management Division BCWWS Broward County Water & Wastewater Services Division

BHMA Builders Hardware Manufacturer's Association

CBM Certified Ballast Manufacturers

CEMA Conveyors Equipment Manufacturer's Association

CGA Compressed Gas Association

CLFMI Chain Link Fence Manufacturer's Institute

CMA Concrete Masonry Association
CRSI Concrete Reinforcing Steel Institute
DIPRA Ductile Iron Pipe Research Association

EIA Electronic Industries Association
ETL Electrical Test Laboratories
EPA Environmental Protection Agency

FBC Florida Building Code

FDEP Florida Department of Environmental Protection

FDOT Florida Department of Transportation

FM Factory Mutual System
FPL Florida Power & Light
FS Federal Specifications
HI Hydraulics Institute

IAPMO International Association of Plumbing and Mechanical Officials

ICBO International Conference of Building Officials
IEEE Institute of Electrical and Electronics Engineers

IES Illuminating Engineering Society
IME Institute of Makers of Explosives
IP Institute of Petroleum (London)
IPC Institute of Printed Circuits

IPCEA Insulated Power Cable Engineers Association

ISA Instrument Society of America

ISO International Organization for Standardization

ITE Institute of Traffic Engineers

MBMA Metal Building Manufacturer's Association
MPTA Mechanical Power Transmission Association
MSS Manufacturers Standardization Society

MTI Marine Testing Institute

NAAMM National Association of Architectural Metal Manufacturer's

NACE National Association of Corrosion Engineers

NBS National Bureau of Standards

NCCLS National Committee for Clinical Laboratory Standards

NEC National Electrical Code

NEMA National Electrical Manufacturer's Association

NFPA National Fire Protection Association NFPA National Forest Products Association NLGI National Lubricating Grease Institute

NMA National Microfilm Association
NSF National Sanitation Foundation

NWMA National Woodwork Manufacturers Association

PROJECT 12166

OSHA Occupational Safety and Health Administration

PCA Portland Cement Association

PPI Plastics Pipe Institute

RCRA Resource Conservation and Recovery Act

RIS Redwood Inspection Service

RVIA Recreational Vehicle Industry Association
RWMA Resistance Welder Manufacturer's Association

SAE Society of Automotive Engineers

SAMA Scientific Apparatus Makers Association

SB Southern Bell

SFWMD South Florida Water Management District

SMA Screen Manufacturers Association

SMACCNA Sheet Metal and Air Conditioning Contractors National Association

SPI Society of the Plastics Industry, Inc.
SPIB Southern Pine Inspection Bureau
SPR Simplified Practice Recommendation
SSA Swedish Standards Association

SSBC Southern Standard Building Code, Southern Building Code Congress

SSPC Steel Structures Painting Council

SSPWC Standard Specifications for Public Works Construction TAPPI Technical Association of the Pulp and Paper Industry

TFI The Fertilizer Institute

UL Underwriters Laboratories, Inc.

WCLIB West Coast Lumber Inspection Bureau WCRSI Western Concrete Reinforcing Steel Institute

WEF Water Environment Federation
WIC Woodwork Institute of California
WRI Wire Reinforcement Institute, Inc.
WWPA Western Wood Products Association

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

SECTION 01090 – REFERENCE STANDARDS

PART 1 GENERAL

1.1 GENERAL

- A. Titles of Sections and Paragraphs
 - Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.

B. Applicable Publications

a. Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the WORK is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.

C. Specialists, Assignments

a. In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the WORK; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the Specifications, all work specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.
- B. References herein to "Building Code" shall mean "Florida Building Code". References to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall

mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all addenda, modifications, amendments, or other lawful changes thereto.

- C. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.
- D. The CONTRACTOR shall construct the WORK specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed herein.
- E. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- F. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

1.3 SPECIFICATION FORMATS AND CONVENTIONS

A. <u>Specification Format.</u> The Specifications are organized into Divisions and Sections using the CSI/CSC's "MasterFormat" numbering system.

a. Section Identification

i. The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.

b. Division 01

i. Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content

a. The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

Page 149 of 409

- i. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
- ii. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.4 REGULATIONS RELATED TO HAZARDOUS MATERIALS

- A. The CONTRACTOR is responsible that all work included in the Contract Documents, regardless if shown or not, shall comply with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.
- B. Where no specific regulations exist, all chemical, hazardous, and petroleum product piping and storage in underground locations must be installed with double containment piping and tanks, or in separate concrete trenches and vaults, or with an approved lining which cannot be penetrated by the chemicals, unless waived in writing by the OWNER.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01152 – APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - a. Division 01 Section "Alteration Project Procedures" for administrative procedures for handling changes to the Contract.
 - b. Division 01 Section "Measurement and Payment" for administrative requirements governing use of unit prices.
 - c. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. <u>Schedule of Values</u>. A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
 - a. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
 Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - b. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - c. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - Differentiate between items stored on-site and items stored offsite. For items stored off-site include evidence of insurance or bonded warehousing.
 - d. Provide separate line items in the Schedule of Values for initial cost of

Page 151 of 409

PROJECT 12166

materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

- e. <u>Allowances</u>: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
- f. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
- g. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as General Condition's expense, at Contractor's option.
- h. <u>Schedule Updating</u>. 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 Citysupplied forms and submit the request to the City Representative before the first of the upcoming month.
- C. Each pay request must be accompanied by an update construction schedule.
- D. Each pay request must be accompanied by a partial release of lien by the General Contractor and by all Subcontractors, suppliers, and for all labor, as outlined below.
 - a. Starting with the second (2nd) pay request and for each and every pay request thereafter, the General Contractor shall submit partial release of liens from all Subcontractors, suppliers, and laborers covering the preceding month's request (SEE FOLLOWING EXAMPLE).

b. EXAMPLE:

- i. In the first (1st) pay request, payment is requested by General Contractor for the asbestos contractor and the electrician. The General Contractor must attach his partial release of lien.
- ii. For the second (2nd) pay request, the General Contractor must attach his partial release of lien from the asbestos contractor and

the electrician for the amounts billed in the 1st pay request; i.e., the General Contractor will be running one (1) month behind with the releases from the Subcontractors, suppliers, etc., until the final pay request.

- E. For each payment application requesting payment for undergrounding allowance for undergrounding work for overhead utilities, written authorization of payment from each utility being requested must be received with payment application.
- F. 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.
- G. 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
- H. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by City.
- I. Payment Application Forms: Use City Form "PERIODIC ESTIMATE FOR PARTIAL PAYMENT" as form for Applications for Payment.
 - a. <u>Application Preparation.</u> Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action.
 - b. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - c. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- J. <u>Release of Lien.</u> With each Application for Payment, submit release of lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - a. Submit partial release of lien on each item for amount requested in previous application, after deduction for retainage, on each item.
 - b. When an application shows completion of an item, submit final release of lien.
 - c. City reserves the right to designate which entities involved in the Work must submit release of lien forms.
- K. <u>Initial Application for Payment.</u> Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - a. List of subcontractors.
 - b. Schedule of Values.

Page 153 of 409

- c. Contractor's Construction Schedule (preliminary if not final).
- d. Products list.
- e. Submittals Schedule (preliminary if not final).
- f. List of Contractor's staff assignments.
- g. Copies of building permits.
- h. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- i. Initial progress report.
- j. Report of preconstruction conference.
- L. <u>Final Payment Application.</u> Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
 - a. Evidence of completion of Project closeout requirements.
 - b. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 - c. Updated final statement, accounting for final changes to the Contract Sum.
 - d. Evidence that claims have been settled.
 - e. Final liquidated damages settlement statement.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01200 - PROJECT MEETINGS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Contractor shall schedule and administer a preconstruction meeting, progress meetings at a minimum of every two weeks on a day established by the CITY's Representative and specially called meetings throughout progress of the work.
 - a. Prepare agenda for meetings.
 - b. Distribute written notice of each meeting five (5) days in advance of meeting date.
 - c. Make physical arrangements for meetings.
 - d. Preside at meetings.
 - e. Record the minutes; include significant proceedings and decisions.
 - f. Reproduce and distribute copies of minutes within three days after each meeting.
 - i. To participants in the meeting.
 - ii. To parties affected by decisions made at the meeting.
 - iii. Furnish three copies of minutes to CITY's Representative.
- B. Representative of CONTRACTOR, subcontractor and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. ENGINEER shall attend all meetings.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 PRE-CONSTRUCTION MEETING

- A. Schedule after date of Notice to Proceed.
- B. <u>Location.</u> A central site, convenient for all parties, designated by CITY's Representative.
- C. Attendance:

- PROJECT 12166
- a. The CONTRACTOR and its superintendent.
- b. CONSULTANT ENGINEER and CONSULTANT ENGINEER'S professional consultants.
- c. Resident Project Representative.
- d. Representatives of the OWNER.
- e. Major subcontractors.
- f. Major Suppliers.
- g. Governmental representatives as appropriate.
- h. Others as requested by CONTRACTOR, CITY or CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER.

D. Suggested Agenda:

- a. Distribution and discussion of:
 - i. List of major subcontractors and suppliers.
 - ii. Projected Construction Schedules.
 - iii. Shop drawings and other submittals.
 - iv. Traffic maintenance plan.
 - v. Community Public Relations.
- b. Critical work sequencing.
- c. Procurement of major equipment and materials requiring a long lead time.
- d. Project Coordination
 - i. Designation of responsible personnel.
- e. Procedures and processing of:
 - i. Field decisions.
 - ii. Proposal requests.
 - iii. Submittals.
 - iv. Change Orders.
 - v. Applications for Payment
- f. Adequacy of distribution of Contract Documents.

Page 156 of 409

- g. Procedures for maintaining Record Documents.
- h. Use of premises:
 - i. Office, work and storage areas.
 - ii. CITY's requirements.
- i. Construction facilities, controls and construction aids.
- j. Temporary utilities.
- k. Safety procedures.
- I. Security procedures.
- m. Housekeeping procedures.

1.4 PROGRESS MEETINGS

- A. Contractor shall schedule regular biweekly meetings on a day established by the CITY's Representative as required.
- B. Hold called meetings as required by progress of the work.
- C. <u>Location of the meetings</u>. Project field office of CITY's Representative.
- D. Attendance:
 - a. CITY's Representative and CITY's professional consultants as needed.
 - b. ENGINEER.
 - c. Subcontractors as active on the site.
 - d. Suppliers as appropriate to the agenda.
 - e. Governmental representatives as appropriate.
 - f. Others, as requested by CONTRACTOR, CITY or CONSULTANT ENGINEER AND CITY'S PROJECT MANAGER.

E. Suggested Agenda:

- a. Review, approval of minutes of previous meeting.
- b. Review of work progress since previous meeting.
- c. Field observations, problems, and conflicts.

- PROJECT 12166
- d. Problems, which impeded Construction Schedule.
- e. Review of off-site fabrication, delivery schedules.
- f. Corrective measures and procedures to regain projected schedule.
- g. Revisions to Construction Schedule.
- h. Progress, schedule, during succeeding work period.
- i. Coordination of schedules.
- j. Community Public Relations.
- k. Review submittal schedules; expedite as required.
- I. Maintenance of quality standards.
- m. Pending changes and substitutions.
- n. Review proposed changes for:
 - i. Effect on Construction Schedule and on completion date.
 - ii. Effect on other contracts of the Project.
- o. Other business.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01311 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - a. Preliminary Construction Schedule.
 - b. Contractor's Construction Schedule.
 - c. Submittals Schedule.
 - d. Daily construction reports.
 - e. Material location reports.
 - f. Field condition reports.
 - g. Special reports.
- B. Related Sections include the following:
 - a. Section 01152 Applications for Payment
 - b. Section 01050 Project Management
 - c. Section 01340 Submittal Procedures
 - d. Section 01311 Construction Photographs
 - e. Section 01400 Quality Control

1.3 DEFINITIONS

- A. <u>Activity.</u> A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - a. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.

- b. <u>Predecessor Activity</u>. An activity that precedes another activity in the network.
- c. <u>Successor Activity.</u> An activity that follows another activity in the network.
- B. <u>CPM</u>. 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. <u>Critical Path.</u> The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. <u>Event.</u> The starting or ending point of an activity.
- E. <u>Float.</u> The measure of leeway in starting and completing an activity.
 - a. <u>Float time</u> is not for the exclusive use or benefit of either City or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - b. <u>Free float</u> is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - c. <u>Total float</u> is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. <u>Fragnet</u>. A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- G. Milestone. A key or critical point in time for reference or measurement.
- H. <u>Network Diagram</u>. A graphic diagram of a network schedule, showing activities and activity relationships.
- I. <u>Resource Loading</u>. The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

- A. <u>Submittals Schedule</u>. Submit three copies of schedule. Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category (action or informational).

- Name of subcontractor.
- e. Description of the Work covered.
- f. Scheduled date for Engineer's final release or approval.
- B. <u>Preliminary Construction Schedule</u>. Submit three opaque copies.
 - a. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.
- C. <u>Preliminary Network Diagram</u>. Submit three opaque copies, large enough to show entire network for entire construction period. Show logic ties for activities.
- D. <u>Contractor's Construction Schedule</u>. Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- E. <u>CPM Reports</u>. Concurrent with CPM schedule, submit three copies of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
 - a. <u>Activity Report</u>. List of all activities sorted by activity number and then early start date, or actual start date if known.
 - b. <u>Logic Report</u>. List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
 - c. <u>Total Float Report</u>. List of all activities sorted in ascending order of total float.
- F. <u>Daily Construction Reports</u>. Submit two copies at monthly intervals.
- G. <u>Material Location Reports</u>. Submit two copies at monthly intervals.
- H. <u>Field Condition Reports</u>. Submit two copies at time of discovery of differing conditions.
- I. Special Reports. Submit two copies at time of unusual event.

1.5 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - a. Secure time commitments for performing critical elements of the Work from parties involved.
 - b. Coordinate each construction activity in the network with other

activities and schedule them in proper sequence.

PART 2 PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. <u>Preparation.</u> Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - a. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - b. <u>Initial Submittal.</u> Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 20 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - i. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
 - c. <u>Final Submittal</u>. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. <u>Procedures.</u> Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. <u>Time Frame.</u> Extend schedule from date established for the Notice to Proceed to date of Final Completion.
- C. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
 - a. <u>Activities</u>. Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following: The schedule shall clearly indicate the critical path and all activities associated with it. The dependencies shall be clearly delineated.
 - b. All activities with a time duration exceeding five (5) days shall be shown as separate items.
 - c. Include procurement process activities for the following long lead items and major items as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - d. Include review and resubmittal times indicated in Division 1 Section

Page 162 of 409

- "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
- e. Where materials require more than one (1) week fabrication or order time, this order/fabrication time shall be shown.
- D. <u>Constraints.</u> Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - a. <u>City-Furnished Products</u>. Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 - b. <u>Work Restrictions</u>. Show the effect of the following items on the schedule:
 - i. Use of premises restrictions.
 - ii. Environmental control.
 - c. <u>Work Stages</u>. Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - Subcontract awards.
 - ii. Submittals.
 - iii. Purchases.
 - iv. Fabrication.
 - v. Sample testing.
 - vi. Deliveries.
 - vii. Installation.
 - viii. Tests and inspections.
 - ix. Adjusting.
 - x. Curing.
- E. <u>Milestones.</u> Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, Final Completion, and Certificate of Occupancy.
- F. <u>Contract Modifications</u>. For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.
- G. Computer Software. Prepare schedules using a program that has been

Page 163 of 409

Exhibit 1

developed specifically to manage construction schedules.

a. Microsoft Project 2000 or Oracle Primavera.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. <u>Gantt-Chart Schedule.</u> 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. <u>Preparation.</u> Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

2.4 REPORTS

- A. <u>Daily Construction Reports</u>. Prepare a daily construction report recording the following information concerning events at Project site:
 - a. List of subcontractors at Project site.
 - b. List of separate contractors at Project site.
 - c. Approximate count of personnel at Project site.
 - d. Equipment at Project site.
 - e. Material deliveries.
 - f. High and low temperatures and general weather conditions.
 - g. Accidents.
 - h. Meetings and significant decisions.
 - i. Unusual events (refer to special reports).
 - j. Stoppages, delays, shortages, and losses.
 - k. Emergency procedures.
 - I. Orders and requests of authorities having jurisdiction.
 - m. Change Orders received and implemented.
 - n. Construction Change Directives received and implemented.
 - o. Services connected and disconnected.
 - p. Equipment or system tests and startups.

Page 164 of 409

- q. Partial Completions and occupancies.
- r. Substantial Completions authorized.
- B. <u>Material Location Reports</u>. At weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.
- C. <u>Field Condition Reports</u>. 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. <u>General.</u> 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. <u>Contractor's Construction Schedule Updating.</u> At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - a. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - b. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - c. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. <u>Distribution.</u> Distribute copies of approved schedule to Engineer, City Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

PROJECT 12166

- a. Post copies in Project meeting rooms and temporary field offices.
- b. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

SECTION 01312 - FIELD ENGINEERING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall provide and pay for field Engineering and Survey services required for the project.
- B. CITY PROJECT MANAGER will identify existing control points and property line corner stakes indicated on the DRAWINGS, as required.

1.2 QUALIFICATIONS OF SURVEYOR

A. Qualified Registered Professional Surveyor & Mapper, acceptable to CITY PROJECT MANAGER.

1.3 SURVEY REFERENCE POINTS

- A. CITY PROJECT MANAGER will provide basic horizontal and vertical control points for the construction project including:
 - a. Permanent coordinate reference points with horizontal and vertical control, located and staked as shown on the plans.
- B. The CONTRACTOR shall locate and protect control points prior to starting site construction WORK, and preserve all permanent reference points during construction.
 - a. Make no changes or relocations without prior written notice to CITY PROJECT MANAGER.
 - b. Report to CITY PROJECT MANAGER when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 - c. CONTRACTOR's surveyor shall replace project control points which may be lost or destroyed.
 - i. Establish replacements based on original survey control.

1.4 PROJECT SURVEY REQUIREMENTS

- A. CONTRACTOR's surveyor shall establish a minimum of two permanent benchmarks on site, referenced to data established by survey control points.
- B. CONTRACTOR shall establish lines and levels, locate and lay out, prepare a HORIZONTAL AND VERTICAL CONTROL PLAN for the purpose of construction staking by instrumentation and similar appropriate means:
 - a. Stakes for grading and fill placement.

FIELD ENGINEERING 01312-1

PROJECT 12166

- b. Controlling lines and levels as required.
- C. From time to time, verify layouts by same methods.
- D. Horizontal and vertical control plan shall be made available to CITY PROJECT MANAGER in ACAD 2017 format or most current release.
- E. Any plan released to the CONTRACTOR via electronic media is for as-built use only. They have not been geometrically calculated by a Surveyor. This applies to all aspects of the plans including, but not limited to, right-of-way, road utilities and drainage.

1.5 RECORDS

- A. Maintain a complete, accurate log of all control and survey WORK as it progresses.
- B. On completion of construction WORK, prepare a certified survey showing all dimensions, locations and elevations of project.

1.6 SUBMITTALS

- A. Submit name and address of Professional Surveyor & Mapper and Professional Engineer to CITY PROJECT MANAGER.
- B. On request of CITY PROJECT MANAGER, submit documentation to verify accuracy of field Engineering WORK.
- C. Submit certificate signed by Registered Engineer or Professional Surveyor & Mapper certifying that elevation and locations of WORK are in conformance, or non-conformance, with Contract Documents.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01320 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Maintain at the site of the OWNER a record copy of:
 - a. DRAWINGS.
 - b. Specifications.
 - c. Addenda.
 - d. Change Orders and other modifications to the Contract.
 - e. Approved Shop DRAWINGS, Product Data and Samples.
 - f. Field Test Records.
 - g. Stormwater Pollution Prevention Plan (SWPPP)

1.2 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in CONTRACTOR's field office apart from documents used for construction:
 - a. Provide files and racks for storage of documents.
 - b. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI format.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by OWNER and CITY PROJECT MANAGER.

1.3 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color cod designated by CITY PROJECT MANAGER.

1.4 RECORDING

A. Label each document, "PROJECT RECORD" in neat large printed letters, or by rubber stamp.

- B. Record information concurrently with construction progress. Do not conceal any WORK until required information is recorded.
- C. DRAWINGS: Legibly mark to record actual construction: (hard copy and ACAD format)
 - a. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - b. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - c. Field changes of dimension and detail.
 - d. Changes made by Field Order or by Change Order.
 - e. Details not on original Contract DRAWINGS.
- D. Specifications and Addenda; Legibly mark each Section to record:
 - a. Manufacturer, trade name, catalog number, and supplier of each produce and item of equipment actually installed.
 - b. Changes made by Field Order or by Change Order.

1.5 AS-BUILT AND RECORD DRAWINGS

- A. The term 'AS-BUILT DRAWING' refers to drawings signed and sealed by a Florida registered surveyor and mapper (PSM) provided by the CONTRACTOR. As-built information will be provided to the Engineer of Record who will prepare or have prepared record drawings based on as-built information provided by the PSM and from information provided by the engineer's staff.
- B. The as-built drawings cover sheet will be signed, sealed and dated by the PSM. The cover sheet will include the PSM's name, business name, PSM number, address and telephone number and contain the following statement:
 - "I hereby certify that the as-built location information of the potable water, reclaimed water, wastewater and drainage facilities shown on these drawings conforms to the minimum technical standards for land surveying in the State of Florida, Chapter 5J-17.050(10)(i) (Florida Administrative Code), as adopted by the Department of Agriculture and Consumer Services, Board of Professional Surveyors and Mappers, and that said as-builts are true and correct to the best of our knowledge and belief."
- C. As-builts will contain the information on the design drawings, plus the following additional requirements:
 - As-builts are to document changes between the design and construction.
 All information that is incorrect due to changes during construction will be corrected. Incorrect or no longer relevant information will be erased or

struck through. Any facilities constructed in a horizontal or vertical location materially different (one-tenth foot horizontal, one-tenth foot vertical) than the design location will have their design location struck through and will be redrafted at the constructed location. Design drawing dimensioning to water and wastewater facilities will be corrected as necessary.

- b. Drawings will be a complete set including cover sheet, index (if one was included in the approved design drawings) and any other sheets included in the approved design set. Standard detail sheets are not necessary.
- c. Drawings will include the MINIMUM AS-BUILT AND RECORD DRAWING CONTENTS described in the City of Fort Lauderdale minimum standards.
- D. The CONTRACTOR shall maintain full size (24"x36") field drawings to reflect the "as-built" items of WORK as the WORK progresses. Upon completion of the WORK, the CONTRACTOR shall prepare a record set of "AS-BUILT" DRAWINGS on full-size, reproducible material and an electronic file in .DWG format (AutoCAD, latest Version). One set of full size design DRAWINGS on reproducible material will be furnished to the CONTRACTOR by the design ENGINEER at the current square foot price. An electronic file of the design DRAWINGS on a compact disk will be furnished to the CONTRACTOR by the design ENGINEER at no additional cost (for as-built purposes only). No additional payment will be made for those "as-built" DRAWINGS.
- E. The cost of maintaining record changes, and preparation of the AS-BUILT DRAWINGS shall be included in the unit prices bid for the affected items. Upon completion of the WORK, the CONTRACTOR shall furnish the CITY PROJECT MANAGER the reproducible AS-BUILT DRAWINGS and electronic files. The completed AS-BUILT DRAWINGS shall be delivered to the CITY PROJECT MANAGER at least 48 hours prior to final inspection of the WORK. The Final Inspection will not be conducted unless the AS-BUILT DRAWINGS are in the possession of the CITY PROJECT MANAGER.
- F. The completed AS-BUILT DRAWINGS shall be certified by a Professional Surveyor and Mapper registered in the State of Florida. This certification shall consist of the surveyor's embossed seal bearing the registration number, the surveyor's signature and date on each sheet of the drawing set. In addition, the key sheet, cover sheet or first sheet of the plans set shall list the business address and telephone number of the surveyor. The final as-builts shall also be submitted using state plane coordinates. (NAVD 1988 for vertical; NAD '83 with '90 adjustment for horizontal).
- G. Representative items of WORK that should be shown on the record DRAWINGS as verified, changed or added are shown below:
 - a. Plans:
 - i. Structure types, location with grade of rim and flow-line elevations.
 - ii. Sewer type, length, size and elevations.

Page 171 of 409

- iii. Utility type, length, size and elevation in conflict structures.
- iv. All maintenance access structures, valves and hydrants within right-of-way.
- v. Spot (critical) elevations at plateaued intersections. (P.C., P.T., and mid point of all intersections, etc.)
- vi. Sewer laterals shall be stationed between maintenance access structures.
- b. <u>Pavement Marking and Signing Plans:</u> Sign location where installed if different from plans.
- c. <u>Water and Sewer Plans:</u> Location (horizontal and vertical) of all pipe lines, structures, fittings, services, valves and appurtenances, and water main / sanitary sewer pipe crossings.
- H. The CONTRACTOR shall submit three sets of progress AS-BUILT DRAWINGS with each application for payment. These DRAWINGS shall accurately depict the WORK completed and for which payment is being requested.
- I. The term 'RECORD DRAWING' refers to the final drawing set signed and sealed by the Engineer of Record. The Engineer of Record will prepare or have prepared record drawings based on as-built information provided by a PSM and from information provided by the engineer's staff. The Engineer of Record shall retain the signed and sealed 'as-built' drawings provided by the PSM with the other project records for possible review by CITY upon request. RECORD DRAWING shall meet the requirements of the Contract Documents.
- J. AS-BUILT and RECORD DRAWINGS shall include the following contents at a minimum.
 - a. The amount of information required on as-built and record drawings will require the drawing author to organize its presentation in order to make the drawings readable. On occasion, it may be necessary to put water and wastewater information on separate sheets, and/or use a table to show coordinate information.
 - b. Show the location of easements used by the water and wastewater facilities.
 - c. Indicate pipe joint locations where water and wastewater or reclaimed water piping crosses.
 - d. Indicate the length of gravity wastewater piping and actual slope between manhole centers.
 - e. Show all abandoned in place facilities including the extent and method of abandonment.
 - f. Show elevations to the nearest tenth of a foot for:

PROJECT 12166

- Top of pipe for water mains, force mains and reclaimed water mains at vertical deflection points and every 200 feet along straight runs.
- ii. Top of pipe of water or wastewater facilities where they cross all other facilities (drainage, telephone, cable TV, electric, etc.)
- g. Show elevations to the nearest one hundredth of a foot for:
 - i. Manholes (MH) rims.
 - ii. Inverts of every gravity wastewater pipe and force main connections to MH.
 - iii. Lift station top of slab, bottom of wet well, influent pipe invert and control set points.
- h. Coordinates will be provided for CITY maintained facilities, including:
 - i. Water mains, force mains and reclaimed water mains at deflection points and every 200 feet along straight runs.
 - ii. The center of each MH, fitting, valve, blow off, hydrant, water meter box, wastewater cleanout, lift station wetwell, double detector check or other non-pipe water or wastewater facility.
 - iii. The location of each connection to existing facilities.
 - iv. The corners (vertices) of all easements being granted to the CITY as a part of the project.
 - v. Other locations designated by CITY.
- i. Show the changed location of any non-water/wastewater features so they are at the visually correct location relative to CITY maintained facilities.
- Drawings shall include color photographs of all connections to existing j. CITY infrastructure as well as all critical utility crossings and where specifically required on the design drawings. The pictures will be taken with a GPS camera that automatically geotags the picture. A maximum of six photographs per sheet is acceptable. Each photograph shall have a minimum size of 8"x10". Photographs shall have a density of 3.0 megapixel or greater. Plot resolution is to be minimum 300 dots per inch. Photographs shall normally be taken from a point between four feet (4') and six feet (6') above the subject infrastructure and shall show good detail in both shadow and sunlit areas. Include a measuring device in the photo for scale and where applicable to indicate the depth or separation of the utilities. A symbol (i.e. an arrow) is to be used in the plan views indicating the location and direction of view for each photograph submitted. The symbol must include the photograph number. A caption under each photograph shall include the following information:

PROJECT 12166

- i. Photograph number
- ii. Photograph description
- iii. Date of photograph
- iv. Location and direction of view (for example 201 NW 34 Street looking North)
- v. State plane coordinates
- vi. All photographs included in the drawings will also be provided to CITY in JPEG format on CD or DVD media. The CD or DVD will be labeled with the CITY project name and number. Individual photo files will be named using the same photograph number contained in the drawings.
- k. The size and material of the piping shall be verified by the survey crew at the time of as-built.
- I. As-builts of all drainage lines shall include the following information:
 - i. Rims, inverts, length of piping between structures, length of exfiltration trench, and weir elevations if applicable.
 - ii. The size and material of the piping shall be verified by the survey crew at the time of as-built.
- m. As-builts for the edge of pavement and sidewalk locations shall include horizontal locations and shall indicate all deviations from the design plans.
- n. All rock as-builts for parking lot, roadways and swales areas shall consist of the following:
 - Rock elevations at all high and low points, and at enough intermediate points to confirm slope consistency and every 50' for roadways.
 - ii. Rock as-builts shall be taken at all locations where there is a finish grade elevation shown on the design plans.
 - iii. All catch basin and maintenance access structure rim elevations shall be shown.
 - iv. Elevations around island areas will also be required.
 - v. As-builts shall be taken on all paved and unpaved swales prior to placement of asphalt and/or topsoil/sod, at enough intermediate points to confirm slope consistency and conformance to the plan details.
 - i. Note: Rock as-builts required prior to paving. Consultant shall

review rock as-builts within five days of receipt.

- o. Lake and canal bank as-builts shall include a key sheet of the lake for the location of cross sections. Lake and canal bank cross sections shall be plotted at a minimum of every 100 lf, unless otherwise specified. Asbuilts shall consist of the location and elevation of the top of bank, edge of water and the deep cut line, with the distance between each shown on the drawing.
- p. Retention area as-built elevations shall be taken at the bottom of the retention area and at the top of bank. If there are contours indicated on the design plans, then they shall be as-built as well.
- q. If a change is made via field order or deviation to any structure, pipeline, etc., a new location shall be noted on the as-builts. The CITY PROJECT MANAGER may request additional as-built information to verify horizontal or vertical locations.

1.6 SUBMITTAL

- A. Submittals of final AS-BUILT DRAWINGS shall be made at the completion of
 - a. the water system;
 - b. the sewer system;
 - c. the entire project.

As-builts shall also be submitted with monthly pay requests. At Contract closeout, deliver all Record Documents to CITY PROJECT MANAGER, for presentation to the OWNER.

- B. A complete set of AS-BUILT DRAWINGS shall be prepared and delivered to the CITY PROJECT MANAGER. WORK shall be performed by a Registered Professional Surveyor and Mapper shall include, but not be limited to the following:
 - a. Valve boxes, splice boxes, pull boxes, all underground utilities-waterlines, electrical runs, irrigation system, storm drainage pipe and structures, sanitary sewer lines and structures, finished necessary grades, benches, curbs, fences, walls, signs, light fixtures and other items as necessary in accordance with CITY Record Plan/As-built plan requirements.
- C. Accompany submittal with transmittal letter in duplicate, containing:
 - a. Date.
 - b. Project title and number.
 - c. CONTRACTOR's name and address.
 - d. Title and number of each Record Document.

PROJECT 12166

- e. Signature of CONTRACTOR or authorized representative.
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION (Not Applicable)

SECTION 01340 – SUBMITTAL PROCEDURES

PART 1 GENERAL

1.3 RELATED DOCUMENTS

E. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.4 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - a. Section 01152, Applications for Payment
 - b. Section 01050, Project Management
 - c. Section 01311, Construction Progress Documentation
 - d. Section 01340, Construction Photographs
 - e. Section 01400, Quality Control
 - f. Section 01700, Contract Closeout
 - g. Section 01720, Project Record Documents
 - h. Divisions 02 through 16 Sections for specific requirements for submittals in those Sections.

1.5 DEFINITIONS

- A. <u>Action Submittals</u>. Written and graphic information that requires Engineer's responsive action.
- B. <u>Informational Submittals</u>. Written information that does not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.6 SUBMITTAL PROCEDURES

- A. <u>Coordination</u>. Coordinate preparation and processing of submittals with performance of construction activities.
 - a. Coordinate each submittal with fabrication, purchasing, testing,

PROJECT 12166

- delivery, other submittals, and related activities that require sequential activity.
- b. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - City reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. <u>Submittals Schedule</u>. Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. <u>Processing Time</u>. Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - a. <u>Initial Review</u>. Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 - b. <u>Intermediate Review</u>. If intermediate submittal is necessary, process it in same manner as initial submittal.
 - c. Resubmittal Review. Allow 10 days for review of each resubmittal.
- D. <u>Identification</u>. Place a permanent label or title block on each submittal for identification.
 - a. Indicate name of firm or entity that prepared each submittal on label or title block.
 - b. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by City.
 - c. Include the following information on label for processing and recording action taken:
 - i. Project name.
 - ii. Date
 - iii. Name and address of Contractor.
 - iv. Name and address of subcontractor.
 - v. Name and address of supplier.

- vi. Name of manufacturer.
- vii. Submittal number or other unique identifier, including revision identifier.
 - a. Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
- viii. Number and title of appropriate Specification Section.
- ix. Drawing number and detail references, as appropriate.
- x. Location(s) where product is to be installed, as appropriate.
- xi. General Contractor's stamp of approval must be on all submittals, indicating that the Contractor has reviewed and approved prior to submitting to the City.
- E. <u>Deviations</u>. Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. <u>Additional Copies</u>. Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- G. <u>Transmittal</u>. Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will return submittals, without review, received from sources other than Contractor.
 - a. Transmittal Form. Provide locations on form for the following information:
 - i. Project name.
 - ii. Date.
 - iii. Destination (To:).
 - iv. Source (From:).
 - v. Names of subcontractor, manufacturer, and supplier.
 - vi. Category and type of submittal.
 - vii. Submittal purpose and description.
 - viii. Specification Section number and title.
 - ix. Drawing number and detail references, as appropriate.

- x. Transmittal number, numbered consecutively.
- xi. Remarks.
- xii. Signature of transmitter.
- H. <u>Resubmittals</u>. Make resubmittals in same form and number of copies as initial submittal.
 - a. Note date and content of previous submittal.
 - b. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - c. Resubmit submittals until they are marked "Approved as submitted" or "Approved as noted".
- I. <u>Distribution</u>. 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. <u>Use for Construction.</u> Use only final submittals with mark indicating "Approved as submitted" or "Approved as noted" by Engineer.

PART 2 PRODUCTS

2.1 ACTION SUBMITTALS

- A. <u>General</u>. Prepare and submit Action Submittals required by individual Specification Sections.
- B. <u>Product Data</u>. Collect information into a single submittal for each element of construction and type of product or equipment.
 - a. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - b. Mark each copy of each submittal to show which products and options are applicable.
 - c. Include the following information, as applicable:
 - i. Manufacturer's written recommendations.
 - ii. Manufacturer's product specifications.
 - iii. Manufacturer's installation instructions.

Page 180 of 409

PROJECT 12166

- iv. Standard color charts.
- v. Manufacturer's catalog cuts.
- vi. Wiring diagrams showing factory-installed wiring.
- vii. Printed performance curves.
- viii. Operational range diagrams.
- ix. Mill reports.
- x. Standard product operation and maintenance manuals.
- xi. Compliance with specified referenced standards.
- xii. Testing by recognized testing agency.
- xiii. Application of testing agency labels and seals.
- xiv. Notation of coordination requirements.
- d. Submit Product Data before or concurrent with Samples.
- e. <u>Number of Copies</u>. Submit five copies of Product Data, unless otherwise indicated. Engineer will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. <u>Shop Drawings</u>. Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 - a. <u>Preparation</u>. Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - i. Dimensions.
 - ii. Identification of products.
 - iii. Fabrication and installation drawings.
 - Roughing-in and setting diagrams.
 - v. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - vi. Shopwork manufacturing instructions.
 - vii. Templates and patterns.
 - viii. Schedules.
 - ix. Design calculations.

- Compliance with specified standards.
- xi. Notation of coordination requirements.
- xii. Notation of dimensions established by field measurement.
- xiii. Relationship to adjoining construction clearly indicated.
- xiv. Seal and signature of professional engineer if specified.
- xv. <u>Wiring Diagrams.</u> Differentiate between manufacturer-installed and field- installed wiring.
- b. <u>Sheet Size</u>. Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches (750 by 1000 mm).
- c. <u>Number of Copies</u>. Submit five opaque copies of each submittal. City will retain three copies; remainder will be returned.
- D. <u>Samples</u>. Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 - a. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - b. <u>Identification</u>. Attach label on unexposed side of Samples that includes the following:
 - i. Generic description of Sample.
 - ii. Product name and name of manufacturer.
 - iii. Sample source.
 - iv. Number and title of appropriate Specification Section.
 - c. <u>Disposition.</u> 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.
 - Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - ii. Samples not incorporated into the Work, or otherwise designated as City's property, are the property of Contractor.

- d. <u>Samples for Initial Selection</u>. Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - Number of Samples. Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. City will return submittal with options selected.
- e. <u>Samples for Verification</u>. Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - i. <u>Number of Samples</u>. Submit three sets of Samples. City will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
 - Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. <u>Product Schedule or List</u>. As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - a. Type of product. Include unique identifier for each product.
 - b. Number and name of room or space.
 - c. Location within room or space.
 - d. <u>Number of Copies</u>. Submit five copies of product schedule or list, unless otherwise indicated. City will return two copies.
 - i. Mark up and retain one returned copy as a Project Record Document.
- F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Construction

Manager's action.

- G. <u>Submittals Schedule</u>. Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- H. <u>Application for Payment</u>. Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. <u>Schedule of Values</u>. Comply with requirements specified in Division 01 Section "Payment Procedures."
- J. <u>Subcontract List</u>. Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - a. Name, address, and telephone number of entity performing subcontract or supplying products.
 - b. <u>Number of Copies</u>. Submit four copies of subcontractor list, unless otherwise indicated. City will return two copies.
 - i. Mark up and retain one returned copy as a Project Record Document.

2.2 INFORMATIONAL SUBMITTALS

- A. <u>General</u>. Prepare and submit Informational Submittals required by other Specification Sections.
 - a. <u>Number of Copies.</u> Submit two copies of each submittal, unless otherwise indicated. City will not return copies.
 - b. <u>Certificates and Certifications</u>. Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - c. <u>Test and Inspection Reports</u>. Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. <u>Coordination Drawings</u>. Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- C. <u>Contractor's Construction Schedule</u>. Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- D. <u>Installer Certificates</u>. Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- E. <u>Product Certificates</u>. Prepare written statements on manufacturer's letterhead

- certifying that product complies with requirements in the Contract Documents.
- F. <u>Material Certificates</u>. Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- G. <u>Material Test Reports</u>. Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- H. <u>Field Test Reports</u>. Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- I. <u>Insurance Certificates and Bonds</u>. Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- J. <u>Construction Photographs</u>. Comply with requirements specified in Section 01380.

PART 3 EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. <u>Approval Stamp</u>. 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. <u>General</u>. Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. <u>Action Submittals</u>. Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - a. Approved as submitted
 - b. Approved as noted
 - c. Revise and resubmit
 - d. Rejected.

PROJECT 12166

- C. <u>Informational Submittals</u>. Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.1 GENERAL

A. Employ competent photographer to take construction record photographs periodically, monthly at a minimum, during course of the work.

1.2 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work.
- B. Section 01720: Project Record Documents.

1.3 PHOTOGRAPHY REQUIRED

- A. Provide photographs taken on cutoff date for each scheduled application for Payment.
- B. Provide photographs taken at each major stage of construction.
- C. Provide photographs taken of change order work.
- D. Provide five prints of each view.

E. Negatives:

- a. Remain property of photographer.
- b. Require that photographer maintain negatives for a period of two years from Date of Substantial Completion of entire Project.
- c. Photographer shall agree to furnish additional prints to OWNER and the ENGINEER at commercial rates applicable at time of purchase.

1.4 COSTS OF PHOTOGRAPHY

- A. CONTRACTOR shall pay costs for specified photography and prints.
 - a. Parties requiring additional photography or prints will pay photographer directly.

1.5 DIGITAL PHOTOGRAPHY

A. At OWNER and ENGINEER's discretion, digital photography may be used for all construction photographs except aerial progress photographs.

PART 2 PRODUCTS

2.1 PRINTS

PROJECT 12166

- A. Color:
 - a. Paper: Single weight, color print paper.
 - b. Finish: Smooth surface, glossy.
 - c. Size: 8-inch x 10-inch.
- B. Identify each print on back, listing:
 - a. Name of Project.
 - b. Specific Location.
 - c. Date and time of exposure.
 - d. Name and address of photographer.
 - e. Photographer's numbered identification of exposure.

PART 3 EXECUTION

3.1 TECHNIQUE

- A. Factual presentation.
- B. Correct exposure and focus.
 - a. High resolution and sharpness.
 - b. Maximum depth-of-field.
 - c. Minimum distortion.

3.2 VIEWS REQUIRED

- A. Photograph from locations to adequately illustrate condition of construction and state of progress.
- B. Photographs shall include aerial photographs showing the entire construction area.

3.3 DELIVERY OF PRINTS

- A. Deliver prints to the ENGINEER to accompany each Application for Payment.
- B. Distribution of prints as soon as processed, is anticipated to be as follows:
 - a. OWNER (one set).
 - b. ENGINEER (two sets).

Page 188 of 409

- PROJECT 12166
- c. Project Record File (one set to be stored by CONTRACTOR).
- d. CONTRACTOR (one set).

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

SECTION 01400 – QUALITY CONTROL

PART 1 GENERAL

1.1 DEFINITION

A. Specific quality control requirements for the WORK are indicated throughout the Contract and Permit Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

1.2 INSPECTION AT PLACE OF MANUFACTURE

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.
- B. The presence of the ENGINEER at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for furnishing products, materials, and equipment, which comply with all requirements of the Contract Documents. Compliance is a duty of the CONTRACTOR, and said duty shall not be avoided by any act or omission on the part of the ENGINEER.

1.3 SAMPLING AND TESTING

- A. Unless otherwise indicated, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

1.4 INSPECTION AND TESTING LABORATORY SERVICE

- A. Inspection and testing laboratory service shall comply with the following:
 - a. CONTRACTOR shall appoint, employ, and pay for services of an independent firm to perform inspection and testing.
 - b. The independent testing firm will perform inspections, testings and other services specified in individual specification sections and as required by

QUALITY CONTROL 01400-1

PROJECT 12166

the ENGINEER or OWNER.

- c. Reports will be submitted to the ENGINEER in duplicate, indicating observations and results of tests and indicating compliance or noncompliance with Contract Documents.
- d. The CONTRACTOR shall cooperate with the OWNER and independent testing firm and furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
- e. The CONTRACTOR shall notify ENGINEER and any applicable permitting agencies 48 hours prior to the expected time for operations requiring inspection and laboratory testing services, so they can be present at the time of testing
- f. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the ENGINEER. The CONTRACTOR shall bear all costs from such retesting at no additional cost to the OWNER.
- g. For samples and tests required for CONTRACTOR'S use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of all sampling and testing shall be included in the Contract Price.
- CONTRACTOR shall bear all costs incurred should the materials for testing not be ready for testing at time specified/scheduled by CONTRACTOR for test.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 INSTALLATION

- A. <u>Inspection</u>. The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. <u>Measurements</u>. The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. <u>Manufacturer's Instructions</u>. Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

SECTION 01410 – TESTING LABORATORY SERVICES

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR will employ and pay for the services of an Independent Testing laboratory to perform all required testing: (All required testing services under the Contract and Permit Documents shall be provided by the CONTRACTOR through an independent testing firm.
 - a. CONTRACTOR shall cooperate with the laboratory to facilitate the execution of its required services.
 - b. Employment of the laboratory by the CONTRACTOR for specific testing shall in no way relieve the CONTRACTOR's obligations to perform the work of the Contract as specified.
 - c. The tests to be provided by the CONTRACTOR shall include, but not be limited to, the following
 - i. Density
 - ii. Proctor
 - iii. Limerock Bearing Ratio (LBR)
 - iv. Carbonate Content
 - v. Gradation
 - vi. Plastic Index and Liquid Limit
 - vii. Organic Content
 - viii. Concrete Compressive Strength and Slump
 - ix. Asphalt Extraction
 - x. Any other tests as required to satisfy an permitting agency requirements.
- B. CONTRACTOR shall pay for all required testing, including bacteriological testing.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.
- 1.3 QUALIFICATION OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E-329.
- C. Authorized to operate in the state in which the project is located.
- D. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of Natural Bureau of Standards during the most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

E. Testing Equipment

- a. Calibrated at reasonable intervals by devices of accuracy traceable to either:
 - i. National Bureau of Standards.
 - ii. Accepted values of natural physical constants.

1.4 LABORATORY DUTIES

- A. Cooperate with OWNER's Representative and CONTRACTOR; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - a. Comply with specified standards.
 - b. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify OWNER's Representative and CONTRACTOR of observed irregularities of deficiencies of work or products.
- D. Promptly submit written report of each test and inspection; one copy each to OWNER's Representative, OWNER, CONTRACTOR, and one copy to Record Document File. Each report shall include:
 - a. Date issued.
 - b. Project title, OWNER'S project number and Parcel number.
 - c. Testing laboratory name, address and telephone number.
 - d. Name and signature of laboratory inspector.
 - e. Date and time of sampling or inspection.

PROJECT 12166

- f. Record of temperature and weather conditions.
- g. Date of test.
- h. Identification of fill product and specification section.
- i. Location of sample or test in the project area (i.e. station and offset or other relevant dimensioning).
- j. Type of inspection or test.
- k. Results of tests and compliance with Contract Documents.
- I. Interpretation of test results, when requested by OWNER's Representative.
- E. Perform additional tests as required by the OWNER's Representative.

1.5 LIMITATION OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
 - a. Release, revoke, alter or enlarge on requirements of Contract documents.
 - b. Approve or accept any portion of the work.
 - c. Perform any duties of the CONTRACTOR.

1.6 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel and provide access to work.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes, which require control by the Testing Laboratory.
- D. Furnish copies of Products test reports as required.
- E. Furnish incidental labor and facilities:
 - a. To provide access to work to be tested.
 - b. To obtain and handle samples at the project site or at the source of the product to be tested.
 - c. To facilitate inspections and tests.
 - d. For storage of test samples.

- PROJECT 12166
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
 - a. When tests or inspections cannot be performed after such notice, reimburse OWNER for laboratory personnel and travel expenses incurred due to CONTRACTOR's negligence.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section. It shall be included in the price for all other work.

SECTION 01505 - MOBILIZATION

PART 1 GENERAL

1.1 GENERAL

- A. Mobilization shall include the obtaining of all permits; moving onto the site of all equipment; temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
 - a. Moving on to the site of all CONTRACTOR's equipment required for first month operations.
 - b. Installing temporary construction power, wiring, and lighting facilities.
 - c. Developing construction water supply.
 - d. Providing field office trailers for the CONTRACTOR, complete with all specified furnishings and utility services including telephones, telephone appurtenances, and copying machine.
 - e. Providing all on-site communication facilities, including telephones and radio pagers.
 - f. Providing on-site sanitary facilities and potable water facilities.
 - g. Arranging for and erection of CONTRACTOR's work, site access, and storage.
 - h. Obtaining all required permits (including Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) permits as needed).
 - i. Having all OSHA required notices and establishment of safety programs.
 - j. Having the CONTRACTOR's superintendent at the job site full time.
 - k. Submitting initial submittals.
 - I. Audio-Visual preconstruction record as described in Section 01010.
 - m. Project identification and signs.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PAYMENT FOR MOBILIZATION

PROJECT 12166

D. The CONTRACTOR's attention is directed to the condition that no payment for mobilization or any part thereof will be approved for payment under the Contract until all mobilization items listed in Paragraph 1.01.A. above have been completed as specified.

END OF SECTION

MOBILIZATION

SECTION 01510 – TEMPORARY UTILITIES

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. <u>Types.</u> The types of utility services required for general temporary use at the project site include the following:
 - a. Water service (potable for certain uses)
 - b. Storm sewer
 - c. Sanitary sewer
 - d. Electric power service
 - e. Telephone service
- B. It shall be the CONTRACTOR's responsibility to provide equipment that is adequate for the performance of the WORK under this Contract within the time specified. All equipment shall be kept in satisfactory operating condition, shall be capable of safety and efficiently performing the required WORK, and shall be subject to inspection and approval by the OWNER's representative at any time within the duration of the Contract. All work hereunder shall conform to the applicable requirements of the OSHA Standards for Construction.

1.2 JOB CONDITIONS

A. <u>Scheduled Uses</u>. The CONTRACTOR shall, in conjunction with establishment of job progress schedule, establish a schedule for implementation and termination of service for each temporary utility or facility; at earliest feasible time, and when acceptable to OWNER and ENGINEER change over from use of temporary utility service to permanent service.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 INSTALLATION OF POWER DISTRIBUTION SYSTEM

A. <u>Power.</u> The CONTRACTOR shall provide all necessary power required for its operations under the Contract, and shall provide and maintain all temporary power lines required to perform the WORK in a safe and satisfactory manner.

3.2 INSTALLATION OF LIGHTING

- A. <u>Construction Lighting.</u> All WORK conducted at night or under conditions of deficient daylight shall be suitable lighted to insure proper WORK and to afford adequate facilities for inspection and safe working conditions.
- 3.3 WATER SUPPLY

- A. <u>General</u>. The OWNER will furnish reasonable quantities of water required by the CONTRACTOR in performance of the WORK under the Contract; however, the CONTRACTOR shall provide all facilities necessary to convey the water from the OWNER-designated source to the points of use in accordance with the requirements of the Contract Document. The CONTRACTOR shall pay all permit and water charges.
- B. <u>Potable Water.</u> All drinking water on the site during construction shall be furnished by the CONTRACTOR and shall be bottled water or water furnished in acceptable metal dispensers. Notices shall be posted conspicuously throughout the site warning the CONTRACTOR's personnel that piped water may be contaminated.
- C. <u>Water Connections.</u> The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency. The CONTRACTOR shall pay all permit and water charges.
- D. <u>Removal of Water Connections</u>. Before final acceptance of the WORK on the project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the ENGINEER and to the agency owning the affected utility.

3.4 INSTALLATION OF SANITARY FACILITIES

- A. <u>Toilet Facilities.</u> Fixed or portable chemical toilets shall be provided wherever needed for the use of CONTRACTOR's employees. Toilets at construction job sites shall conform to the requirements of Subpart D, Section 1926.51 of the OSHA Standards for Construction.
- B. <u>Sanitary and Other Organic Wastes</u>. The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wasted from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the ENGINEER and in accordance with all laws and regulations pertaining thereto.

3.5 INSTALLATION OF FIRE PROTECTION

A. <u>Fire Protection</u>. The construction of the WORK shall be connected with the CONTRACTOR's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the WORK, and responsible persons shall be designated and instructed in the operation such fire apparatus so as to prevent or minimize the hazard of fire. The CONTRACTOR's fire protection

PROJECT 12166

program shall conform to the requirements of Subpart F of the OSHA Standards for Construction.

3.6 INSTALLATION OF COMMUNICATIONS

- A. <u>Telephone Services</u>. The CONTRACTOR shall provide and maintain at all time during the progress of the WORK not less than one telephone in good working order, at its own field construction office, at or near the site of the WORK included in the Contract. Each such telephone shall be connected to an established exchange for toll service and with all other telephones utilized by the CONTRACTOR.
- B. <u>Telephone Use</u>. The CONTRACTOR shall permit the ENGINEER, the OWNER, or their authorized representatives or employees free and unlimited use of said telephone facilities for all calls that do not involve published toll charges. Calls originated by the ENGINEER, the OWNER, their authorized representatives or employees who involve toll or the CONTRACTOR at the rates charged by the telephone company shall bill message unit charge to the OWNER.

3.7 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section; it shall be included in the lump sum price for Mobilization.

SECTION 01520 - CONSTRUCTION AIDS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Furnish, install and maintain required construction aids, remove on completion of work.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.2 CONSTRUCTION AIDS

- A. Provide construction aids and equipment required by personnel and to facilitate execution of the work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such facilities and equipment.
 - a. Refer to respective sections for particular requirements for each trade.
 - b. Provide protective coverings for finished surfaces.
- B. Maintain facilities and equipment in first-class condition.

PART 3 EXECUTION

3.1 PREPARATION

A. Consult with OWNER's Representative, review site conditions and factors which affect construction procedures and construction aids including adjacent properties and public facilities which may be affected by execution of the work.

3.2 GENERAL

- A. Comply with applicable requirements specified in sections of Division 2 through 4 (as applicable).
- B. Relocate construction aids as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements of OWNER and other Contractors employer at the site.
- 3.3 REMOVAL

- A. Completely remove temporary materials, equipment and services:
 - a. When construction needs can be met by use of permanent construction.
 - b. At completion of project.
- B. Clean, repair damage caused by installation or by use of temporary facilities.
 - a. Remove foundations and underground installations for construction aids.
 - b. Grade areas of site affected by temporary installations to required elevations and slopes, and clean the area.
- C. Restore permanent facilities used for temporary purposes to specified condition.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of all other work.

SECTION 01530 – PROTECTION OF EXISTING FACILITIES

PART 1 GENERAL

1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. The CONTRACTOR shall verify the exact locations and depths of all utilities shown and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the WORK. All such exploratory excavations shall be performed as soon as practicable after award of the contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's work. When such exploratory excavations show the utility location as shown to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.2 RIGHTS-OF-WAY

The CONTRACTOR shall not do any work that would affect any oil, gas, Α. sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified by the ENGINEER that the OWNER has secured authority from the proper party. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support or otherwise protect such pipeline, transmission line, ditch, fence, or structure or replace the same. When two or more contracts are being executed at one time on the same or adjacent land in such manner that work on one contract may interfere with that on another, the OWNER shall determine the sequence and order of the WORK. When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the OWNER to the CONTRACTOR so desiring, to the extent, amount, in the manner, and at the times permitted. No such decision as to the method or time of conducting the WORK or the use of territory shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the WORK in the General Conditions of the Contract.

1.3 PROTECTION OF STREET OR ROADWAY MARKERS

A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without

proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. All survey markers or points disturbed by the CONTRACTOR shall be accurately restored after all streets or roadway resurfacing has been completed.

1.4 RESTORATION OF PAVEMENT

- A. <u>General.</u> All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. All temporary and permanent pavement shall conform to the requirements of the affected pavement OWNER. All pavements which are subject to partial removal shall be neatly saw cut in straight lines.
- B. <u>Temporary Resurfacing</u>. Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. <u>Permanent Resurfacing</u>. In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. Restoration of Sidewalks or Private Properties. Wherever sidewalks or private properties and driveways have been removed for purposes of construction, the CONTRACTOR shall place suitable temporary sidewalks or driveways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or, if no such period of times is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or driveways until the final restoration thereof has been made. The CONTRACTOR shall restore all private properties within thirty (30) days after a complaint is received by the OWNER.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

A. <u>General</u>. The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

- B. <u>Utilities to be Moved</u>. In the case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the ENGINEER and the OWNER of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- D. <u>OWNER's Right of Access</u>. The right is reserved to the OWNER and to the OWNERs of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- E. <u>Underground Utilities Indicated</u>. Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR.
- F. <u>Underground Utilities Not Indicated</u>. In the event that the CONTRACTOR damages any existing utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the ENGINEER. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions for changes and extra work contained in the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of the General Conditions.
- H. <u>Approval of Repairs</u>. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement OWNER and the ENGINEER before being concealed by backfill or other work.
- I. <u>Maintaining in Service</u>. All oil and gasoline pipelines, power, and telephone or

the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

J. <u>Existing Water Services</u>. CONTRACTOR shall protect and provide temporary support for existing water services. Any water service damaged by the CONTRACTOR shall be replaced at the CONTRACTOR's expense, with a new water service complete with new water main tap.

1.6 TREES WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

- A. <u>General</u>. The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of- way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or OWNER. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company under permit from the jurisdictional agency and/or the OWNER. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.
- B. <u>Trimming.</u> Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1-1/2 inches in diameter shall be coated with an asphaltic emulsion material.
- C. Replacement. The CONTRACTOR shall immediately notify the jurisdictional agency and/or the OWNER if any tree is damaged by the CONTRACTOR's operations. If, in the opinion of said agency or the OWNER, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree at CONTRACTOR's own expense. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the CONTRACTOR shall pay to the OWNER of said tree a compensatory payment acceptable to the tree OWNER, subject to the approval of the jurisdictional agency or OWNER. The size of the trees shall be not less than 1-inch diameter nor less than 6 feet in height.

1.7 NOTIFICATION BY THE CONTRACTOR

A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the CONTRACTOR shall notify the respective authorities representing the OWNERs or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative

of said OWNERs or agencies can be present during such work if they so desire. The CONTRACTOR shall also notify the Sunshine State One Call Center 1-800-432-4770 at least 2 days, but no more than 14 days, prior to such excavation.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.2 FENCING

A. Materials to CONTRACTOR's option, minimum fence height = 6 feet.

2.3 BARRIERS

A. Materials to CONTRACTOR's option, as appropriate to serve required purpose.

PART 3 EXECUTION

3.1 GENERAL

- A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for required purposes.
- B. Maintain barriers during entire construction period.
- C. Relocate barriers as required by progress of construction.

3.2 TREE AND PLANT PROTECTION

- A. Preserve and protect existing trees and plants adjacent to work areas.
- B. Consult with OWNER's Representative and remove agreed-on roots and branches which interfere with work.
 - a. Employ qualified tree surgeon to remove branches, and to treat cuts.
- C. Protect root zones of trees and plants.
 - a. Do not allow vehicular traffic and parking.
 - b. Do not store materials or products.
 - c. Prevent dumping of refuse or chemically injurious materials or liquids.
 - d. Prevent puddling or continuous running water.
- D. Carefully supervise all work to prevent damage.
- E. Replace trees and plants which are damaged or destroyed due to work

Page 207 of 409

PROJECT 12166

operations under this contract.

3.3 REMOVAL

- A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by OWNER's Representative.
- B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of all other work.

SECTION 01550 – SITE ACCESS AND STORAGE

PART 1 GENERAL

1.1 HIGHWAY LIMITATIONS:

A. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the WORK. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

1.2 TEMPORARY CROSSINGS:

- A. <u>General</u>. Continuous, unobstructed, safe, and adequate pedestrian and vehicular access shall be provided to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, service stations, motels, fire and police stations, and hospitals. Safe and adequate public transportation stops and pedestrian crossings at intervals not exceeding 300 feet shall be provided. The CONTRACTOR shall cooperate with parties involved in the delivery of mail and removal of trash and garbage so as to maintain existing schedules for such services. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access for reasonable periods of time.
- B. <u>Temporary Bridges.</u> Wherever necessary, the CONTRACTOR shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges or steel plates, which written consent shall be delivered to the ENGINEER prior to excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges or steel plates for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.
- C. <u>Street Use</u>. Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the WORK hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise indicated. Toe boards shall be provided to retain excavated material if required by the ENGINEER or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the WORK shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, storm drain inlets, and other drainage

facilities.

D. Traffic Control

- a. For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the requirements of Broward County and the "Manual of Uniform Traffic Control Devices, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations," published by U.S. Department of Transportation, Federal Highway Administration (ANSI D6.1).
- b. The CONTRACTOR shall take all necessary precautions for the protection of the WORK and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The CONTRACTOR shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of the Florida Department of Transportation.
- c. The CONTRACTOR shall submit 3 copies of a traffic control plan to the ENGINEER for approval a minimum of 2 weeks prior to construction. The ENGINEER reserves the right to observe these traffic control plans in use and to make any changes as field conditions warrant. Any changes shall supersede these plans and be done solely at the CONTRACTOR's expense.
- d. The CONTRACTOR shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.
- E. <u>Temporary Driveway Closure</u>. The CONTRACTOR shall notify the OWNER or occupant (if not Owner-occupied) of the closure of the driveways to be closed more than one eight-hour work day at least 3 working days prior to the closure. The CONTRACTOR shall minimize the inconvenience and minimize the time period that the driveways will be closed. The CONTRACTOR shall fully explain to the OWNER/occupant how long the work will take and when closure is to start. Total closure time shall not exceed 5 days.

1.3 CONTRACTOR'S WORK AND STORAGE AREA:

- A. The CONTRACTOR shall designate and arrange for the use of a portion of the property, adjacent to the WORK for its exclusive use during the term of the Contract as a storage and shop area for its construction operations relative to this Contract.
- B. The CONTRACTOR shall make its own arrangements for any necessary offsite storage or shop areas necessary for the proper execution of the WORK.

- C. The CONTRACTOR shall construct and use a separate storage area for hazardous materials used in constructing the WORK.
 - a. For the purpose of this paragraph, hazardous materials to be stored in the separate area are all products labeled with any of the following terms: Warning, Caution, Poisonous, Toxic, flammable, Corrosive, Reactive, or Explosive. In addition, whether or not so labeled, the following materials shall be stored in the separate area: diesel fuel, gasoline, new and used motor oil, hydraulic fluid, cement, paints and paint thinners, two-part epoxy coatings, sealants, asphaltic products, glues, solvents, wood preservatives, sand blast materials, and spill absorbent.
 - b. Hazardous materials shall be stored in groupings according to the Material Safety Data Sheets.
 - c. The CONTRACTOR shall develop and submit to the ENGINEER a plan for storing and disposing of the materials above.
 - d. The CONTRACTOR shall obtain and submit to the ENGINEER a single EPA number for wastes generated at the site.
 - e. The separate storage area shall meet all the requirements of all authorities having jurisdiction over the storage of hazardous materials.
 - f. All hazardous materials which are delivered in containers shall be stored in the original containers until use. Hazardous materials which are delivered in bulk shall be stored in containers which meet the requirements of authorities having jurisdiction.

1.4 PARKING:

- A. The CONTRACTOR shall:
 - a. Provide temporary parking areas for ENGINEER and OWNER's use.
 - b. The CONTRACTOR shall direct its employees to park in designated areas secured by the CONTRACTOR.
 - c. Traffic and parking areas shall be maintained in a sound condition, free of excavated material, construction equipment, mud, and construction materials. The CONTRACTOR shall repair breaks, potholes, low areas which collect standing water, and other deficiencies.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section, it shall be included in the price of Mobilization and of all other work.

SECTION 01560 – TEMPORARY CONTROLS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Provide and maintain methods, equipment, and temporary construction, as necessary, to provide controls over environmental conditions at the construction site and related area under CONTRACTOR's control; remove physical evidence of temporary facilities at completion of work.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 NOISE CONTROL

- A. Provide all necessary requirements for noise control during the construction period.
 - a. Noise procedures shall conform to all applicable OSHA requirements and local ordinances having jurisdiction on the work.
 - b. Noise levels during nighttime hours shall not exceed 55 db measured at the property line of a residence.

1.4 DUST CONTROL

A. Provide positive methods and apply dust control materials to minimize raising dust from construction operations, and provide positive means to prevent airborne dust from dispersing into the atmosphere.

1.5 WATER CONTROL

- A. Provide methods to control surface water to prevent damage to the project, the site, or adjoining properties.
 - a. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.
- B. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface and water.
- C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

1.6 PEST CONTROL

A. Provide pest control as necessary to prevent infestation of construction or

PROJECT 12166

storage area.

- a. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.
- b. Should the use of pesticides be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to ENGINEER. Clearly indicate:
 - i. The area or areas to be treated.
 - ii. The pesticide to be used, with a copy of the manufacturer's printed instructions.
 - iii. The pollution preventative measures to be employed.
- B. The use of any pesticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.7 RODENT CONTROL

- A. Provide rodent control as necessary to prevent infestation of construction or storage area.
 - a. Employ methods and use materials, which will not adversely affect conditions at the site or on adjoining properties
 - b. Should the use of rodenticide be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to OWNER's Representative. Clearly indicate:
 - i. the area or areas to be treated.
 - ii. the rodenticide to be used, with a copy of the manufacturer's printed instructions.
 - iii. the pollution preventative measures to be employed.
- B. The use of any rodenticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.8 DEBRIS CONTROL

- A. Maintain all areas under CONTRACTOR's control free of extraneous debris.
- B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking area, or along access roads and haul routes.
 - a. Provide containers for deposit of debris as specified in Section 01710 Cleaning.

PROJECT 12166

- b. Prohibit overloading of trucks to prevent spillage on access and haul routes.
- c. Provide periodic inspection of traffic areas to enforce requirements.
- C. Schedule periodic collections and disposal of debris as specified in Section 01710 Cleaning.
 - a. Provide additional collections and disposal of debris whenever the periodic schedule is to prevent accumulation.

1.9 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- B. Provide equipment and personnel, perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids.
 - a. Excavate and dispose of any contaminated earth off-site and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters.
 - a. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.
- D. Provide systems for control of atmospheric pollutants.
 - a. Prevent toxic concentrations of chemicals.
 - b. Prevent harmful dispersal of pollutants into the atmosphere.

1.10 EROSION CONTROL

- A. Plan and execute construction and earthwork, by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas to prevent erosion and sedimentation.
 - a. Hold the areas of bare soil exposed at one time to a minimum
 - b. Provide temporary control measures such as berms, dikes and drains.
 - c. Provide silt screens as required preventing surface water contamination.
- B. Construct fills and waste areas by selective placement to eliminate surface silts or clays, which will erode.
- C. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.

PROJECT 12166

- D. All erosion control procedures must comply with the National Pollutant Discharge Elimination System (NPDES).
- PART 2 PRODUCTS (Not Applicable)
- PART 3 EXECUTION
- 3.1 MEASUREMENT AND PAYMENT
 - A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

SECTION 01570 – TRAFFIC REGULATIONS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Provide, operate and maintain equipment, services and personnel, with traffic control and protective devices, as required to expedite vehicular traffic flow to provide safe and expeditious movement of traffic through and on haul routes, at site entrances, in construction zones, on-site access roads, and parking areas including driving and/or walking public.
- B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or specified conditions.
- C. The requirements specified herein are in addition to the plan for Maintenance of Traffic as specified in Section 01500.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 TRAFFIC SIGNALS AND SIGNS

A. Provide and operate traffic control and directional signals or signs required to direct and maintain an orderly flow of traffic in all areas under CONTRACTOR's control, or affected by CONTRACTOR's operations.

1.4 FLAGPERSON

A. Provide qualified and suitably equipped flag-person when construction operations encroach on traffic lanes, as required for regulation of traffic.

1.5 FLARES AND LIGHTS

- A. Provide flares and lights during periods of low visibility:
 - a. To clearly delineate traffic lanes and to guide traffic.
 - b. For use of flag-person in directing traffic.
- B. Provide illumination of critical traffic and parking areas.
 - a. Maintain free vehicular access to and through parking areas.
 - b. Prohibit parking on or adjacent to access roads, or in non-designated areas.

1.6 HAUL ROUTES

- A. Consult with OWNER and governing authorities, establish public thorough fares which will be used as haul routes and site access.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to expedite traffic flow, to minimize interference with normal public traffic.

1.7 EMERGENCY ACCESS

A. In order to provide protection to the workers and residents, the Contractor shall maintain emergency access to all adjacent properties at all times during construction. If a road is required to be closed to vehicular traffic and the distance of the closure exceeds 150 feet between stabilized surfaces, or prevents access to properties for a distance that exceeds 150 feet, the Contractor shall provide a 10 foot wide stabilized access way on one side of the trench capable of supporting a Fire Truck. Contractor shall also provide stabilized access ways across the trench or un-stabilized area a minimum of 6 feet in width at a spacing not to exceed 100 feet capable of supporting foot traffic. These access ways shall be protected and delineated with lighted barricades or other such devices as approved by the regulatory agency. Both ends of the emergency access way shall be blocked in accordance with the MOT permit approved by the City of Fort Lauderdale and FDOT with signage indicating that this access way is to be used by emergency vehicles only.

No trenches or holes shall be left open after working hours. In the event a trench must be left open after hours, it shall be done so only with the express written permission from the Engineer, and it shall be the Contractor's responsibility to provide proper protection of the open trench or hole as required by the regulatory agency. In addition the Contractor shall provide a security guard at the site whenever the Contractor's personnel are not present, 24 hours per day/ 7 days per week. It shall be the Security Guard's responsibility to protect the open trench or hole from trespassers and to direct emergency personnel on site. The Security Guard shall not have any other responsibilities such as operation pumps or equipment but shall be dedicated to protecting the trench or open hole. The Security Guard shall be equipped with a wireless telephone capable of calling 911 to report an emergency and shall keep that telephone on their person at all times. In addition to this provision the contractor shall maintain trench safety and comply with current OSHA regulations and the Trench Safety Act. The contractor shall maintain and keep all safety barricades, signage, flashers, and detours, in operation condition. A copy of the approved MOT plans, and details, shall be on site at all times.

B. Measurement and payment for security guard services shall be included in the utility pipe installation unit price. Measurement for temporary emergency access ways will be paid for under the specified line item at the unit price described in the bid schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

PROJECT 12166

3.1 MEASUREMENT AND PAYMENT

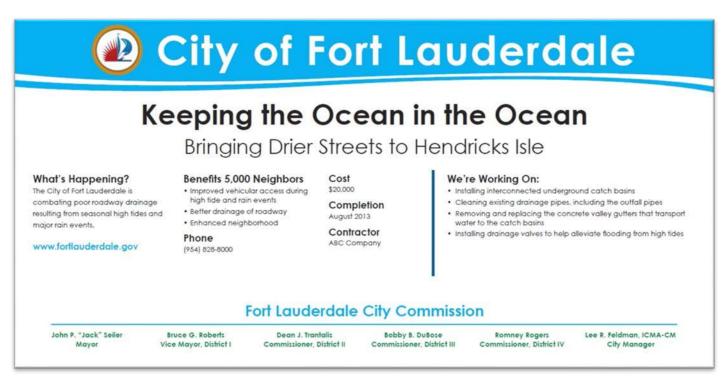
A. There shall be no special measurement and payment for work under the section; it shall be included in the lump sum price bid for Maintenance of Traffic.

END OF SECTION

SECTION 01590 - PROJECT SIGN

PART 1 GENERAL

- 1.1 REQUIREMENTS INCLUDED
 - A. Contractor shall furnish a 4' x 8' sign, below is a sample, not specific to the project.
 - B. Sign shall be made to be weather resistant and on display for entire length of contract.
 - C. Shop drawings must be submitted prior to sign construction.
 - D. The exact style and design of the sign will be provided during the preconstruction meeting.



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

END OF SECTION

Construction Sign Request Form P11870D

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:	

Date

Project Manager Signature

PROJECT 12166

Senior Project Manager Signature		Date	
	,		

SECTION 01600 - MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the work:
 - a. Conform to applicable specifications and standards.
 - b. Comply with size, make, type and quality specified, or as specifically approved in writing by the OWNER's Representative.
 - c. Manufactured and fabricated products:
 - i. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - ii. Manufacture like parts of duplicate units to standard sizes and gauges to be interchangeable.
 - iii. Two or more items of the same kind shall be identical, by the same manufacturer.
 - iv. Products shall be suitable for service conditions.
 - v. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - d. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- Conditions of the Contract.

1.3 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to OWNER's Representative. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
 - a. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with OWNER's Representative for

further instructions.

- b. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.4 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site. Products shall be delivered to the job site on an "as needed" basis.
 - a. Deliver products in undamaged condition, in manufacturers' original containers or packaging, with identifying labels intact with legible markings.
 - b. Immediately upon delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.
 - c. Pipe and materials shall not be strung out along installation routes for longer than two (2) weeks prior to installation.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.
- C. Coordinate deliveries to avoid conflict with Work and conditions at site:
 - a. Work of other contractors, or OWNER.
 - b. Limitations of storage space.
 - c. Availability of equipment and personnel for handling products.
 - d. OWNER's use of premises.
- D. Deliver products in undamaged condition in original containers or packaging, with identifying labels intact and legible.
- E. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts and to facilitate assembly.
- F. Immediately on delivery, inspect shipment to assure:
 - a. Product complies with requirements of Contract Documents and reviewed submittals.
 - b. Quantities are correct.

- c. Containers and packages are intact, labels are legible.
- d. Products are properly protected and undamaged.
- G. Provide equipment and personnel necessary to handle products, including those provided by OWNER, by methods to prevent soiling or damage to products or packaging.
- H. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.
- I. Handle products by methods to prevent bending or overstressing.
- J. Lift heavy components only at designated lifting points.

1.5 STORAGE

- A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - a. Store products subject to damage by the elements in weather-tight enclosures.
 - b. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - c. Store unpacked products on shelves, in bins or in neat piles, accessible for inspection.

B. Exterior Storage

- a. Provide substantial platforms, blocking or skids to support fabricating products above ground, prevent soiling or staining.
 - i. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
- b. Store loose granular materials on solid surface such as paved areas, or provide plywood or sheet materials to prevent mixing with foreign matter.
 - i. Provide surface drainage to prevent flow or ponding of rainwater.
 - ii. Prevent mixing of refuse or chemically injurious materials or liquids.

1.6 MAINTENANCE OF STORAGE

- A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
 - a. State of storage facilities is adequate to provide required conditions.

- b. Required environmental conditions are maintained on continuing basis.
- c. Surfaces of products exposed to elements are not adversely affected.
 - i. Any weathering of products, coatings and finishes is not acceptable under requirements of Contract Documents.
- B. Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.

1.7 PROTECTION AFTER INSTALLATION

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.
- B. Control traffic to prevent damage to equipment and surfaces.
- C. Provide coverings to protect finished surfaces from damage.
 - a. Cover projections, wall corners, and jambs, sills and soffits of openings, in areas used for traffic and for passage of products in subsequent work.
 - b. Protect finished floors and stairs from dirt and damage.
 - i. In areas subject to foot traffic, secure heavy paper, sheet goods, or other materials in place.
 - ii. For movement of heavy products, lay planking or similar materials in place.
 - Cover wall and floor surfaces in the vicinity of construction personnel activities and all finished surfaces used by construction personnel.

D. Waterproofed surfaces

- a. Prohibit use of surfaces for traffic of any kind, and for storage of any products.
- b. When some activity must take place in order to carry out the Contract, obtain recommendations of installer for protection of surface.
 - i. Install recommended protection; remove on completion of that activity.
 - ii. Restrict use of adjacent unprotected areas.

E. Lawns and landscaping

a. Prohibit traffic of any kind across planted lawn and landscaped areas.

F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

1.8 SUBSTITUTIONS AND PRODUCT OPTIONS

- Limitations on substitutions.
 - a. During bidding period, Instructions to Bidders govern times for submitting requests for substitutions under requirements specified in this section.
 - b. Substitutions will not be considered when indicated on shop drawings or product data submittals without separate formal request, when requested directly by Subcontractor or supplier, or when acceptance will require substantial revision of Contract Documents.
 - c. Substitute products shall not be ordered or installed without written acceptance.
 - d. Only one (1) request for substitution for each product will be considered. When substitution is not accepted, provide specified product.

B. Products List

a. Within 15 days after Contract Date submit to ENGINEER a complete list of major products proposed to be used, with the name of the manufacturer and the installing Subcontractor.

C. Contractors Options

- a. For products specified only by reference standard, select any product meeting that standard.
- b. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named or approved equal, which complies with the Specifications.
- c. For products specified by naming one or more products or manufacturers and "or approved equal," CONTRACTOR must submit a request as for substitutions for any product or manufacturer not specifically named.

D. Substitutions

- a. For a period of 15 days after Contract Date, ENGINEER will consider written request from CONTRACTOR for substitution of products.
- b. Identify product by specification Section and Article Numbers. Provide manufacturer's name and address, trade name of product, and model of catalog number. List fabricators and suppliers as appropriate.
- c. List similar projects using product, dates of installation, and names of ENGINEER and OWNER.

- d. List availability of maintenance services and replacement materials.
- e. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate, including:
 - i. Comparison of the qualities and performance of the proposed substitution with that specified.
 - ii. Changes required in other elements of the work because of the substitution.
 - iii. Effect on the construction schedule.
 - iv. Cost data comparing the proposed substitution with the product specified.
 - v. Any required license fees or royalties.
 - vi. Availability of maintenance services, and source of replacement materials.
- f. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
- g. The ENGINEER will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the ENGINEER's decision shall be final.
- h. The ENGINEER may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute.
- The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
- j. Acceptance by the ENGINEER of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
- k. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR work, the work of its Subcontractors and of other Contractors, and shall effect such changes without cost to the OWNER.
- E. Contractors Representation:
 - a. A request for a substitution constitutes a representation that CONTRACTOR:
 - i. Has investigated the proposed product and determined that it is

Page 227 of 409

PROJECT 12166

- equal to or superior in all respects to that specified.
- ii. Will provide the same guarantees or bonds for the substitution as for the product specified.
- iii. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.
- iv. Waives all claims for additional costs, under CONTRACTOR'S responsibility, which may subsequently become apparent.

F. Submittal Procedures

- a. Submit three (3) copies of request for substitution.
- b. ENGINEER will review requests for substitutions with reasonable promptness, and notify CONTRACTOR, in writing, of the decision to accept or reject the requested substitution.
- c. During the bidding period, ENGINEER will record acceptable substitutions in Addenda.
- d. After award of Contract, ENGINEER will notify CONTRACTOR, in writing, of decision to accept or reject requested substitutions in Addenda.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01710 - CLEANING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Execute cleaning, during progress of the Work, and at completion of the Work, as required by the General Conditions.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by cleaning material manufacturer.

PART 3 EXECUTION

3.1 DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulation of waste material, rubbish and windblown debris, resulting from Construction Work.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.
- C. The OWNER's Representative reserves the right to direct the CONTRACTOR to remove waste materials
- D. <u>Mechanical Sweeping</u>. CONTRACTOR shall maintain on site a mechanical sweeping device for removing debris from existing, temporary and permanent pavement.
- 3.2 DUST CONTROL

Page 229 of 409

- A. Perform operations so that dust and other contaminants resulting from Construction Work operations will not cause any damages or maintenance problems to adjacent properties.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.3 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Polish glossy surfaces to a clear shine.
- D. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- E. Prior to final completion, or OWNER occupancy, CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify the entire work is clean.
- F. All storage and staging areas shall be cleaned and returned to prior conditions or better as per requirements of this section.

3.4 MEASUREMENT AND PAYMENT

A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

END OF SECTION

SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General 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 Project Record Documents, including the following:
 - a. Record Drawings.
 - Record Specifications.
 - c. Record Product Data.

1.3 SUBMITTALS

- A. <u>Record Drawings</u>. Comply with the following:
 - a. Number of Copies. Submit one set of marked-up Record Prints.
- B. <u>Record Specifications</u>. Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data. Submit one copy of each Product Data submittal.
 - a. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 PRODUCTS

2.1 RECORD DRAWINGS

- A. <u>Record Prints</u>. Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.
 - a. <u>Preparation</u>. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - i. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.

- ii. Accurately record information in an understandable drawing technique.
- iii. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - a. Document with photographs.
- b. <u>Content</u>. Types of items requiring marking include, but are not limited to, the following:
 - i. Dimensional changes to Drawings.
 - ii. Revisions to details shown on Drawings.
 - iii. Depths of foundations.
 - iv. Locations and depths of underground utilities.
 - v. Revisions to routing of piping and conduits.
 - vi. Revisions to electrical circuitry.
 - vii. Actual equipment locations.
 - viii. Changes made by Change Order or Work Change Directive.
 - ix. Changes made following Engineer's written orders.
 - x. Details not on the original Contract Drawings.
 - xi. Field records for variable and concealed conditions.
 - xii. Record information on the Work that is shown only schematically.
- Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately.
 If Shop Drawings are marked, show cross-reference on the Contract Drawings.
- d. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
- e. Mark important additional information that was either shown schematically or omitted from original Drawings.
- f. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- g. Immediately before inspection for Certificate of Substantial Completion,

review marked-up Record Prints with Engineer. Make corrections where required.

- B. <u>Format</u>. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - Record Prints. Organize Record Prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - b. <u>Identification</u>. As follows:
 - i. Project number.
 - ii. Project name.
 - iii. Date.
 - iv. Designation "PROJECT RECORD DRAWINGS."
 - v. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. <u>Preparation</u>. Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - a. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - c. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - d. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 - e. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. <u>Preparation</u>. Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - a. Include significant changes in the product delivered to Project site and

Page 233 of 409

PROJECT 12166

changes in manufacturer's written instructions for installation.

b. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. <u>Recording</u>. Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. <u>Maintenance of Record Documents and Samples</u>. Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.
- C. Record Documents of water, sewer and drainage must be provided for the General Contractor by a Professional Land Surveyor and must be satisfactory for approval by the OWNER and shall comply with the latest approved version of the CADD City Standards.
- D. Final pay request will not be processed until Record Documents have been completed and submitted to the City.

END OF SECTION

SECTION 01780 CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SUBMITTALS

- A. Informational Submittals:
 - a. Submit prior to application for final payment.
 - i. Record Documents.
 - ii. As-built drawings (signed and sealed hardcopies and electronic format PDF and CAD files)
 - iii. Special Bonds, Special Guarantees, and Service Agreements.
 - iv. Consent of Surety to Final Payment.
 - v. Releases or Waivers of Liens and Claims.
 - vi. Releases from Agreements.
 - vii. Final Application for Payment: Submit in accordance with procedures and requirements stated in Section 01025, Measurement and Payment.
 - viii. Spare Parts, Special Tools and Extra Materials: As required by individual Specification sections.
- B. Subcontractor Identification Form:
 - a. Submit form with final pay request.
 - b. Submit a separate form for each subcontractor used.
 - c. For Capital Improvement Projects, submit form along with final pay request to the PCM.
 - d. Form is attached as a Supplement to this Section.

1.2 RECORD DOCUMENTS

- A. Quality Assurance:
 - a. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.
 - b. Accuracy of Records:
 - i. Coordinate changes within record documents, making legible and

accurate entries on each sheet of Drawings and other documents where such entry is required to show change.

- ii. Purpose of Project record documents is to document factual information regarding aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.
- c. Make entries within 24 hours after receipt of information that a change in the Work has occurred.
- d. Prior to submitting each request for progress payment, request PCM's review and approval of current status of record documents. Failure to properly maintain, update, and submit record documents may result in a deferral by PCM to recommend whole or any part of Contractor's Application for Payment, either partial or final.

1.3 RELEASES FROM AGREEMENTS

- A. Furnish Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's construction right-of-way.
- B. In the Event Contractor is Unable to Secure Written Releases:
 - a. Inform PCM of the reasons.
 - b. Owner or its representatives will examine the site, and Owner will direct Contractor to complete the Work that may be necessary to satisfy terms of the side agreement or special easement.
 - c. Should Contractor refuse to perform this Work, Owner reserves right to have it done by separate contract and deduct cost of same from Contract Price, or require Contractor to furnish a satisfactory Bond in a sum to cover legal claims for damages.
 - d. When Owner is satisfied that the Work has been completed in agreement with Contract Documents and terms of side agreement or special easement, right is reserved to waive requirement for written release if:
 - Contractor's failure to obtain such statement is due to grantor's refusal to sign, and this refusal is not based upon any legitimate claims that Contractor has failed to fulfill terms of side agreement or special easement, or
 - ii. Contractor is unable to contact or has had undue hardship in contacting grantor.

1.4 AS-BUILT DRAWINGS

A. Quality Assurance

- a. As-built drawings must meet all minimum City of Fort Lauderdale CAD standards and be submitted in the latest version of AutoCAD available at the time the contract is signed.
- b. As-built drawings will be submitted in both electronic and hard copy forms as follow:
 - 3 hard copy sets of as-builts will be submitted on 24x36 paper signed, sealed, and dated by a Florida Professional Licensed Surveyor (PLS).
 - ii. 1 CD or jump drive which will include both DWG files for the package and a PDF document including the surveyors signature and seal.
- c. As-built drawings will include the following:
 - i. PLS name, business name, license numbers, address, and telephone number
 - ii. The following statement must be included:
 - "I hereby certify that the as-built location information of the potable water, reclaimed water, wastewater and drainage facilities shown on these drawings conforms to the minimum technical standards for land surveying in the State of Florida, Chapter 5J-17.050(10)(i) (Florida Administrative Code), as adopted by the Department of Agriculture and Consumer Services, Board of Professional Surveyors and Mappers, and that said as-builts are true and correct to the best of our knowledge and belief."
 - iii. As-built drawings will contain the information on the design drawings (plan and profile views) plus document changes between the design and construction including correcting all information that is incorrect due to changes during construction. Incorrect or no longer relevant information will be erased or struck through. All location changes constructed materially different (one-tenth foot horizontal, one tenth vertical) than the design location will have their design location struck through and will be redrafted at the constructed location. Design drawing dimensioning will be corrected as necessary.
 - iv. Drawing will be a complete set including cover sheet, index, and any other sheets included in the approved design set. Standard detail sheets are not necessary.
- B. Minimum As-Built Drawing Requirements (Not applicable for this project)
 - Show the location of easements used by the water and wastewater facilities.

- PROJECT 12166
- b. Indicate pipe joint locations where water and wastewater or reclaimed water piping crosses.
- c. Indicated the length of gravity wastewater piping and actual slope between manhole centers.
- d. Show all abandoned in place facilities including the extent and method of abandonment.
- e. Show elevations to the nearest tenth of a foot for top of pipe for water mains, force mains, and reclaimed water mains at vertical deflection points, all bends, valves and fittings and every 200 feet along straight runs and where they cross all other facilities.
- f. Show elevations to the nearest one hundredth of a foot for manhole rims, gravity main inverts at the manhole, force main connections to manholes, lift station top of slab, bottom of wet well, influent pipe invert and control set points.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 MAINTENANCE OF RECORD DOCUMENTS

A. General:

- a. Promptly following commencement of Contract Times, secure from Engineer, at no cost to Contractor, one complete set of Contract Documents. Drawings will be full size.
- b. Delete Engineer title block and seal from all documents.
- c. Label or stamp each record document with title, "RECORD DOCUMENTS," in neat large printed letters.
- d. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded. Contractor is responsible for maintaining up-to-date "red-lined" markups, on site, of all changes including revised locations of buried features and provides access to the City for review at any time.
- e. All piping inserts, fittings, and valve locations shall be located by a Florida Licensed Surveyor in accordance with City of Fort Lauderdale surveying standards and per NAVD 88. Contractor shall provide adequate notice to the surveyor to ensure that all locations are accessible, prior to backfill.

B. Preservation:

a. Maintain documents in a clean, dry, legible condition and in good order.

Page 238 of 409

Do not use record documents for construction purposes.

- b. Make documents and Samples available at all times for observation by PCM or Engineer.
- C. Making Entries on Drawings:
 - a. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
 - i. Color Coding:
 - a. Green when showing information deleted from Drawings.
 - b. Red when showing information added to Drawings.
 - c. Blue and circled in blue to show notes.
 - b. Date entries.
 - c. Call attention to entry by "cloud" drawn around area or areas affected.
 - d. Legibly mark to record actual changes made during construction, including, but not limited to:
 - i. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.
 - ii. Horizontal and vertical locations of existing and new Underground Facilities and appurtenances, and other underground structures, equipment, or Work. Reference to at least two measurements to permanent surface improvements.
 - Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - iv. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
 - v. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, Written Amendment, and Engineer's written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.
 - e. Dimensions on Schematic Layouts: Show on record drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.
 - i. Clearly identify the item by accurate notes such as "cast iron drain," "galv. water," and the like.

- PROJECT 12166
- ii. Show, by symbol or note, vertical location of item ("under slab," "in ceiling plenum," "exposed," and the like).
- iii. Make identification so descriptive that it may be related reliably to Specifications.
- D. Coordination with Florida Licensed surveyor:
 - a. Contractor shall not cover any bends, valves, or fittings installed until they have been located by the survey crews for the purpose of preparing asbuilt and/or Record Drawings.
 - b. If the above conditions are not met, for any reason, Contractor shall bear the cost of potholing the constructed installation to allow for the locations.

3.2 FINAL CLEANING

- A. At completion of the Work or of a part thereof and immediately prior to Contractor's request for certificate of Substantial Completion; or if no certificate is issued, immediately prior to Contractor's notice of completion, clean entire site or parts thereof, as applicable.
 - a. Leave the Work and adjacent areas affected in a cleaned condition satisfactory to Owner and PCM.
 - b. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces.
 - c. Repair, patch, and touch up marred surfaces to specified finish and match adjacent surfaces.
 - d. Clean all windows.
 - e. Clean and wax wood, vinyl, or painted floors.
 - f. Broom clean exterior paved driveways and parking areas.
 - g. Hose clean sidewalks, loading areas, and others contiguous with principal structures.
 - h. Rake clean all other surfaces.
 - i. Replace air-handling filters and clean ducts, blowers, and coils of ventilation units operated during construction.
 - j. Leave water courses, gutters, and ditches open and clean.
- B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.
- C. Meet all requirements of Section 02575, Surface Restoration.

3.3 SUPPLEMENTS

- A. The supplements listed below, following "END OF SECTION," are part of this Specification.
 - a. Subcontractor Identification Form (See next page).

END OF SECTION



SUBCONTRACTOR IDENTIFICATION FORM

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

1)	CITY OF FORT LAUDERDALE PROJECT NO					
2)	PROJECT DESCRIPTION					
3)	SUBContractor					
	Business Name					
	Address					
	Telephone & Fax Nos.					
	Email Address/Company Wesbsite (if applicable)					
4)	SUBCONTRACTOR'S PRINCIPAL OFFICER					
5)	CLASSIFICATION OF WORK SUBCONTRACTED OUT					
6)	COST OF WORK SUBCONTRACTED OUT					
7)	Please check the item(s) which properly identify the ownership status of the subcontractor's firm:					
	Subcontractor firm is not a MBE or WBE					
	Subcontractor firm is a MBE, as at least 51 percent is owned and operated by one or more socially and economically-disadvantaged individuals:					
	☐ American Indian ☐ Asian ☐ Black ☐ Hispanic ☐ White					
	Subcontractor firm is a WBE, as at least 51 percent is owned and operated by one or more women.					
	☐ American Indian ☐ Asian ☐ Black ☐ Hispanic ☐ White					
8)	PRIME Contractor					
	NAME & TITLE OF PRIME CONTRACTOR'S REPRESENTATIVE COMPLETING THIS FORM (Please					

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

PROJECT 12166

(Telephone No.)	(Fax No.)	(Email Addre
SIGNATURE	I	DATE
Prime Contracto	or's Representative	

SECTION 02050 DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this section.

1.02 WORK INCLUDED

A. Provide all labor, materials, necessary equipment and services to complete the site demolition work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS."

1.03 RELATED WORK

- A. Section 02200 Earthwork.
- B. All applicable Sections under Divisions 1, 2, and 3.

1.04 QUALITY ASSURANCE

- A. Demolition contractor qualifications: Minimum of five (5) years experience in demolition of comparable nature.
- B. Requirements of All Applicable Regulatory Agencies:
 - 1. All applicable Building Codes and other Public Agencies having jurisdiction upon the work.

1.05 SUBMITTALS

- A. Certificates of severance of utility services.
- B. Permit for transport and disposal of debris.
- C. Demolition procedures and operational sequence for review and acceptance by ENGINEER.

1.06 <u>JOB CONDITIONS</u>

A. Existing Conditions

- 1. The demolition work shall be done as indicated on the construction plans.
- 2. Remove all demolition debris from the site the same day the work is performed. Leave no deposits of demolished material on site overnight.
- 3. Structural demolition, excavation, backfill and compaction as indicated in drawings.

B. Protection:

- 1. Erect barriers, fences, guard rails, enclosures, and shoring to protect personnel, structures, and utilities remaining intact.
- 2. Protect designated trees and plants from damages.
- 3. Use all means necessary to protect existing objects and vegetation designated to remain, and, in the event of damage, immediately make all repairs, replacements and dressings to damaged plants necessary, to the approval of the ENGINEER at no additional cost to the OWNER.

C. Maintaining Traffic:

- 1. Ensure minimum interference with roads, streets, driveways, sidewalks, and adjacent facilities.
- 2. Do not close or obstruct streets and sidewalks without written approval from the ENGINEER.
- 3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.

D. Dust Control:

1. Use all means necessary for preventing dust from demolition operations from being a nuisance to adjacent property owners. Methods used for dust control are subject to approval by the ENGINEER prior to use.

E. Burning:

- 1. Burning will not be permitted.
- F. No explosives will be permitted.

1.07 GENERAL ITEMS

- A. Scope of work shall comprise the following: Provide all labor, materials, necessary equipment and services to complete the demolition and clearing work, as indicated on the contract plans, and as specified herein.
- B. The CONTRACTOR shall provide references to the OWNER to demonstrate a minimum of five years experience in demolition of a comparable nature. Current occupational licenses held by CONTRACTOR shall be submitted to OWNER.
- C. The CONTRACTOR shall be responsible for adherence to all applicable codes of all regulatory agencies having jurisdiction upon the works.

1.08 PRE-DEMOLITION MEETING

A. A meeting shall be held with the OWNER or his representative at the jobsite to describe intended demolition and cleaning procedures and schedules. This shall include identifying access routes for bringing necessary equipment in, removing debris from site, and designation of any trees, drives or other items to remain.

1.09 EXISTING CONDITIONS

- A. The CONTRACTOR shall become thoroughly familiar with the site, and of existing utilities and their connections, and note all conditions which may influence the work.
- B. By submitting a bid, the CONTRACTOR affirms that CONTRACTOR has carefully examined the site and all conditions affecting work. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.
- C. The removal of A.C. pipe shall be done in strict compliance with local, state, and federal regulations. The OWNER shall be notified immediately by the CONTRACTOR should any hazardous materials be discovered during demolition.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 INSPECTION

A. Verify that structures to be demolished are discontinued in use and ready for removal.

B. Do not commence work until all conditions and requirements of all applicable public agencies are complied with.

3.02 PREPARATION

A. Arrange for, and verify termination of utility services to include removing meters and capping lines.

B. Notification:

1. Notify the OWNER at least three (3) full working days prior to commencing the work of this Section.

3.03 CLARIFICATION

- A. The drawings do not purport to show all objects existing on the site.
- B. Before commencing the work of this Section, verify with the OWNER all objects to be removed and all objects to be preserved.

3.04 SCHEDULING

- A. Schedule all work in a careful manner with all necessary consideration for the public and the OWNER.
- B. Avoid interference with the use of, and passage to and from, adjacent facilities.

3.05 DISCONNECTION OF UTILITIES

- A. Before starting site operations, disconnect or arrange for the disconnection of all effected utility service.
 - 1. Arrange and pay for disconnecting, removing, capping, and plugging utility services. Disconnect and stub off. Notify affected utility company in advance and obtain approval before starting this work.
 - 2. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction.
 - 3. Place markers to indicate location of disconnected services.
 - 4. On-site drainage structures and drain fields shall be removed in their entirety by methods approved by the OWNER's representative.

3.06 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. Utility Services: Maintain existing off-site utilities, keep in service, and protect against damage during demolition operations.
- B. Prevent movement or settlement of adjacent structures. Provide and place bracing or shoring and be responsible for safety and support of structures. Assume liability for such movement, settlement, damage, or injury.
- C. Cease operations and notify OWNER immediately if safety of adjacent structures appears to be endangered. Take precautions to properly support structures. Do not resume operations until safety is restored.
- D. Prevent movement, settlement, damage, or collapse of adjacent services, sidewalks, driveways and trees. Assume liability for such movement, settlement, or collapse. Promptly repair damage at no cost to the OWNER.
- E. Ensure safe passage of persons around areas of demolition.

3.07 MAINTAINING TRAFFIC

A. Do not interfere with use of adjacent buildings and facilities. Maintain free and safe passage to and from. Conduct demolition operations and removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed travel ways if required by governing authorities.

3.08 POLLUTION CONTROLS

- A. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
- B. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations as directed by the OWNER or his representative or governing authorities. Return adjacent areas to condition existing prior to start of work.

3.09 INSPECTION AND PREPARATION

A. Verify that structures to be demolished are discontinued in use and ready for removal.

- B. Do not commence work until all conditions and requirements of all applicable public agencies are complied with.
- C. Arrange for, and verify termination of utility services to include removing meters and capping lines.
- D. The drawings do not purport to show all objects existing on the site; at the predemolition meeting before commencement of the work, verify with the OWNER all objects to be removed and all objects to be preserved.

3.10 DEMOLITION

- A. Pull out any existing utility lines designated for abandonment, irrigation, electrical lines, pull boxes and splice boxes, manholes and catch basins to be removed and all other objects designated to be removed or interfering with the work. Contact the utility company or agency involved for their requirements for performing this work. No equipment and materials shall be allowed to remain in the work area after the day it was removed.
- B. Remove all debris from the site and leave the site in a neat, orderly condition to the full acceptance of the ENGINEER, or the OWNER. No debris shall be left on the site over night.
- C. Clear and Grub and dispose of all trees, shrubs and other organic matter not otherwise addressed on tree removal and relocation plans and specifications.

3.11 DEMOLITION OF SITE STRUCTURES

A. Demolish all site structure items designated to be removed or which are required to be removed to perform the work. This item does not include buildings.

3.12 REMOVAL OF DEBRIS AND DISPOSAL OF MATERIAL

- A. Material resulting from demolition and not scheduled for salvaging shall become the property of the CONTRACTOR and shall be removed from site and legally disposed of off-site. Disposal shall be timely, performed as promptly as possible and not left until the final cleanup. Material shall not be left on the job site for more than 60 days.
- B. Remove from site contaminated, vermin infested, or dangerous materials encountered and dispose of by safe means so as not to endanger health of workers and public.
- C. Burning of removed materials from demolished structures will not be permitted.

SISTRUNK PARKING LOT 12 PROJECT # 12166

3.13 COMPLETION OF WORK

- A. Leave the site in a neat, orderly condition to the full acceptance of the OWNER.
- B. Dirt remaining after demolition shall be graded level and compacted, in preparation for filling operations to follow demolition. Trenches shall be filled in layers of 12" maximum thickness and compacted in accordance with the technical specifications applicable to backfilling of trenches.

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

CLEARING AND GRUBBING

02110-1

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 <u>CLEARING AND GRUBBING</u>

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 02200 EARTHWORK

PART 1 - GENERAL

1.01 <u>RELATED DOCUMENTS</u>

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the Earthwork, as indicated on the drawings, as specified herein or both.
- B. Including, but not necessarily limited to the following:
 - 1. Excavation, including demucking.
 - 2. Backfilling.
 - 3. Filling.
 - 4. Grading, general site and building pads.
 - 5. Compaction.
- C. There shall be no classification of excavation for measurement of payment regardless of materials encountered.
- D. The work of this Section includes all earthwork required for construction of the WORK. Such earthwork shall include, but not be limited to, the loosening, removing, loading, transporting, depositing, and compacting in its final location of all materials wet and dry, as required for the purpose of completing the WORK specified in the Contract Documents, which shall include, but not be limited to, the furnishing, placing, and removing of sheeting and bracing necessary to safely support the sides of all excavation; all pumping, ditching, draining, and other required measures for the removal or exclusion of water from the excavation; the supporting of structures above and below the ground; all backfilling of trenches and pits; the disposal of excess excavated materials; borrow of materials to makeup deficiencies for fills; and all other incidental earthwork, all in accordance with the requirement of the Contract Documents.

1.03 RELATED WORK

A. Section 02211 - Site Grading.

EARTHWORK 02200-1

B. All applicable sections of Division 1, 2, and 3.

1.04 <u>REFERENCE SPECIFICATIONS, CODES, AND STANDARDS</u>

- A. Codes: All codes, as referenced herein, are specified in Section 01090, "Reference Standards."
- B. Commercial Standards, latest edition:

ASTM D 422	Method for Particle-Size Analysis of Soils, latest revision.
ASTM D 698	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lbs. (2.49-kg) Rammer and 12-in (304.8-mm) Drop.
ASTM D 1556	Test Method for Density of Soil in Place by the Sand Cone Method.
ASTM D 1557	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 10-lb (4.54-kg) Rammer and 18-in (457-mm) Drop.
ASTM D 1633	Test Method for Compressive Strength of Molded Soil-Cement Cylinders.
ASTM D 2419	Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
ASTM D 2487	Classification of Soils for Engineering Purposes.
ASTM D 2901	Test Method for Cement Content of Freshly Mixed Soil-Cement.
ASTM D 2922	Test Method for Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth).
ASTM D 4253	Test Methods for Maximum Index Density of Soils Using a Vibratory Table.
ASTM D 4254	Test Methods for Minimum Index Density of Soils and Calculation of Relative Density.

1.05 <u>SUBSOIL INFORMATION</u>

A. There are no representations of any type made as to subsurface conditions.

1.06 <u>SITE INSPECTION</u>

A. The CONTRACTOR shall visit the site to become acquainted with all existing conditions and make any subsurface investigation to felt necessary to be satisfied as to site and subsurface conditions. Such subsurface investigations shall be performed only under time schedules and arrangements approved in advance by the OWNER's Representative and ENGINEER.

1.07 TOPOGRAPHIC INFORMATION

A. The existing grades shown on the drawings are approximate only and no representation is made as to their accuracy or consistency. The CONTRACTOR shall verify all existing grades to the extent necessary to insure completion of the job to the proposed grades indicated on the drawings.

1.08 <u>DISPOSAL OF SURPLUS OR UNSUITABLE MATERIAL</u>

A. Unsuitable material encountered during the course of construction shall be removed from the construction site at the expense of the CONTRACTOR. Unsuitable material shall not be stockpiled on-site. All suitable material shall be stockpiled on-site at areas designated by the ENGINEER, and shall be removed from construction site at the expense of contactor, as directed by owner.

1.09 BENCH MARKS AND MONUMENTS

A. CONTRACTOR shall employ a Florida registered surveyor to lay out lines and grades as indicated. Benchmarks shall be established by a surveyor registered in the State of Florida. Benchmarks shall be permanent and easily accessible and maintained and replaced if disturbed or destroyed. All benchmarks shall be NGVD.

1.10 UTILITIES

- A. Locate all existing active utility lines traversing the site and determine the requirements for their protection. Preserve in operating conditions all active utilities adjacent to or traversing the site and/or designated to remain.
- B. Observe rules and regulations governing respective utilities in working under requirements of this Section. Adequately protect utilities from damage, remove or replace as indicated, specified or required. Remove, plug or cap inactive or abandoned utilities encountered in excavation. Record location of all utilities.

1.11 **QUALITY ASSURANCE**

- A. The soil engineer may be retained by the OWNER to observe performance of work in connection with excavating, filling, grading, and compaction. The CONTRACTOR shall re-adjust all work performed that does not meet technical or design requirements but make no deviations from the Contract Documents without specific and written acceptance of the ENGINEER.
- B. Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with ASTM D 1557. Where cohesionless, free draining soil material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D 4253 and D 4254. Field density in-place tests will be performed in accordance with ASTM D 1556, ASTM D 2922, or by such other means acceptable to the ENGINEER.

If the tests of the fill or backfill show non-compliance with the required density, the CONTRACTOR shall accomplish such remedy as may be required to insure compliance. Subsequent testing to show compliance shall be by a testing laboratory selected by the OWNER and shall be at the CONTRACTOR's expense.

- D. Particle size analysis of soils and aggregates will be performed using ASTM D 422.
- E. Determination of sand equivalent value will be performed using ASTM D 2419.
- F. Unified Soil Classification System: References in these specifications to soil classification types and standards set forth in ASTM D 2487, latest edition shall have the meanings and definitions indicated in the chart illustrated at the end of this Section. The chart is reproduced herein for the convenience of the CONTRACTOR only, and no limitations, amendment, or modification is intended thereby. The CONTRACTOR shall be bound by all applicable provisions of said ASTM D 2487 in the interpretation of soil classifications.
- G. Requirements of all applicable building codes and other public agencies having jurisdiction upon the WORK.

PART 2 - PRODUCTS

2.01 SUITABLE FILL AND BACKFILL MATERIAL REQUIREMENTS

A. General: Fill, backfill, and embankment materials shall be suitable selected or processed clean fine earth, rock, or sand, free from grass, roots, brush, or other vegetation.

- B. Fill and backfill materials to be placed within 6 inches of any structure or pipe shall be free of rocks or unbroken masses of earth materials having a maximum dimension larger than 3 inches.
- C. Suitable Material: Soils not classified as unsuitable as defined in Paragraph entitled, "Unsuitable Material" herein, are defined as suitable materials and may be used in fills, backfilling, and embankment construction subject to the specified limitations. In addition, when acceptable to the ENGINEER, some of the material listed as unsuitable may be used when thoroughly mixed with suitable material to form a stable composite.
- D. Suitable materials may be obtained from on-site excavations, may be processed on-site materials, or may be imported. If imported materials are required to meet the requirements of this Section or to meet the quantity requirements of the project the CONTRACTOR shall provide the imported materials at no additional expense to the OWNER.
- E. The following types of suitable materials are designated and defined as follows:
 - 1. Type A (one inch minus granular backfill): Crushed rock, gravel, or sand with 100 percent passing a 1-inch sieve and a sand equivalent value not less than 50.
 - 2. Type B (one half inch minus granular backfill): Crushed rock, gravel, or sand with 100 percent passing a ½-inch sieve and a sand equivalent value not less than 50.
 - 3. Type C (sand backfill): Sand with 100 percent passing a 3/8-inch sieve, at least 90 percent passing a number 4 sieve, and a sand equivalent value not less than 30.
 - 4. Type D (coarse rock backfill): Crushed rock or gravel with 100 percent passing a 1-inch sieve and not more than 10 percent passing a Number 4 sieve.
 - 5. Type E (pea gravel backfill): Crushed rock or gravel with 100 percent passing a ½-inch sieve and not more than 10 percent passing a Number 4 sieve.
 - 6. Type F (coarse drainrock): Crushed rock or gravel meeting the following gradation requirements:

Sieve Size	Percentage Passing
2-inch	100
1-1/2-inch	90-100

1-inch	20-55
¾-inch	0-15
No. 200	0-3

7. Type G (aggregate base): Crushed rock aggregate base material of such nature that it can be compacted readily by watering and rolling to form a firm, stable base for pavements. At the option of the CONTRACTOR, the grading for either the 1-1/2-inch maximum size or ³/₄-inch maximum size shall be used. The sand equivalent value shall be not less than 22 and the material shall meet the following gradation requirements.

Percer	ntage Passing	
Sieve Size	1 ½-inch Max.	3/4-inch Max.
2-inch	100	-
1-1/2 inch	90-100	-
1-inch	-	100
³ / ₄ -inch	50-85	90-100
No. 4	25-45	35-55
No. 30	10-25	10-30
No. 200 2-9	2-9	

8. Type H (graded drainrock): Drainrock shall be crushed rock or gravel, durable and free from slaking or decompostion under the action of alternate wetting or drying. The material shall be uniformly grades and shall meet the following gradation requirements.

Sieve Size	Percentage Passing	
1-inch	100	
¾-inch	90-100	
3/8-inch	40-100	
No. 4	25-40	
No. 8	18-33	
No. 30	5-15	
No. 50	0-7	
No. 200	0-3	

The drainrock shall have a sand equivalent value not less than 75. The finish graded surface of the drainrock immediately beneath hydraulic structures shall be stabilized to provide a firm, smooth surface upon which to construct reinforced concrete floor slabs. The CONTRACTOR shall use, at its option, one of the asphalt types listed below:

	Type 1	<u>Type 2</u>	Type 3
Designation	SC-70	SC-250	RS-1
Spray Temperature	(°F)135-175	165-200	70-120
Coverage (gal/sq. y	rd.) 0.50	0.50	0.50

If the surface remains tacky, sufficient sand shall be applied to absorb the excess asphalt.

- 9. Type I: Any other suitable material as defined herein.
- 10. Type J (cement-treated backfill): Material which consists of Type H material, or any mixture of Types B, C, G, and H materials which has been cement-treated so the cement content of the material is not less than 5 percent by weight when tested in accordance with ASTM D 2901. The ultimate compressive strength at 28 days shall be not less than 400 psi when tested in accordance with ASTM D 1633.
- 11. Type K (topsoil): Stockpiled topsoil materials, which has been obtained at the site by removing soil to a depth not exceeding 2 feet. Removal of the topsoil shall be done after the area has been stripped of vegetation and debris as specified.
- 12. Type L (Class I crushed stone): Manufactured angular, granular crushed stone, rock, or slag, with 100 percent passing a 1-inch sieve and less than 5 percent passing a Number 4 sieve.
- 13. Type M (aggregate sub-base): Crushed rock aggregate sub-base material that can be compacted readily by watering and rolling to form a firm stable base. The sand equivalent value shall not be less than 18 and shall meet the following gradation requirements:

Sieve Size	Percentage Passing
3-inch	100
2-1/2 inch	87-100
No. 4	35-95
No. 200	0-29

14. Type N (trench plug): Low permeable fill material, a nondispersible clay material having a minimum plasticity index of 10.

2.02 UNSUITABLE MATERIAL

A. Unsuitable soils for fill material shall include soils which, when classified under ASTM D 2487, fall in the classifications of Pt, OH, CH, MH or OL.

Bid 12248-193

B. In addition, any soil, which cannot be compacted sufficiently to achieve the percentage of maximum density specified for the intended use, shall be classified as unsuitable material.

2.03 <u>USE OF FILL, BACKFILL, AND EMBANKMENT MATERIAL TREES</u>

- A. The CONTRACTOR shall use the types of materials as designated herein for all required fill, backfill, and embankment construction hereunder.
- B. Where these Specifications conflict with the requirements of any local agency having jurisdiction, or with the requirements of a material manufacture, the ENGINEER shall be immediately notified. In case of conflict therewith, the CONTRACTOR shall use the most stringent requirement, as determined by the ENGINEER.
- C. Fill and backfill types shall be used in accordance with the following provisions:
 - 1. Embankment fills shall be constructed of Type I material, as defined herein, or any mixture of Type I and Type A through Type H materials.
 - 2. Pipe zone backfill, as defined under "Pipe and Utility Trench Backfill" herein, shall consist of the following materials for each pipe material listed below. Where pipelines are installed on grades exceeding 4 percent, and where backfill materials are graded such that there is less than 10 percent passing a Number 4 sieve, trench plugs of Type J or N material shall be provided at maximum intervals of 200 feet or as shown on the Drawings.
 - a. Mortar coated pipe, concrete pipe, and uncoated ductile iron pipe shall be provided Type A, B, C, D, E, or L pipe zone backfill material.
 - b. Coal tar enamel coated pipe, polyethylene encased pipe, tape wrapped pipe, and other non-mortar coated pipe shall be backfilled with Type C pipe zone backfill material.
 - c. Plastic pipe and virtified clay pipe shall be backfilled with Type L pipe zone backfill material.
 - 3. Trench zone backfill for pipelines as defined under "Pipe and Utility Trench Backfill" shall be Type 1 backfill material of any of Types A through H backfill materials or any mixture thereof, except that Type K material may be used for trench zone backfill in agricultural areas unless otherwise shown on the Drawings.
 - 4. Final backfill material for pipelines under paved area, as defined under "Pipe and Utility Trench Backfill" shall be Type G backfill material. Final

backfill under areas not paved shall be the same material as that used for trench backfill, except that Type K material shall be used for final backfill in agricultural areas unless otherwise shown or specified.

- 5. Trench backfill and final backfill for pipelines under structures shall be the same material as used in the pipe zone, except where concrete encasement is required by the Contract Documents.
- 6. Aggregate base materials under pavements shall be Type G material constructed to the thickness shown or specified. Where specified or shown, aggregate sub-base shall be Type M Material.
- 7. Backfill around structures shall be Type I material, or Types A through Type H materials, or any mixture thereof.
- 8. Backfill materials beneath structures shall be as follows:
 - a. Drainrock materials under hydraulic structures or other water retaining structure with underdrain systems shall be Type H materials.
 - b. Under concrete hydraulic structures or other water retaining structures without underdrain systems, Types G or H materials shall be used.
 - c. Under structures where groundwater must be removed to allow placement of concrete, Type F material shall be used.
 - d. Under all other structures, Type D, E, G, or H material shall be used.
- 9. Backfill used to replace pipeline trench over-excavation shall be a layer of Type F material with a 6-inch top filter layer of the Type E material or filter fabric to prevent migration of fines for wet trench conditions or the same material as used for the pipe zone backfill if the trench conditions are not wet. Filter fabric shall be Mirafi 140 N, Mirafi 700X, or equal.
- 10. The top 6 inches of fill on reservoir roofs, embankment fills around hydraulic structures, and all other embankment fill shall consist of Type K material, topsoil.

2.04 EMBANKMENT

A. The maximum sizes of rock, which will be permitted in the completed fill areas, are as follows:

Denth Relow

Maximum

Depui Below	Maxilliulli
Finish Grade	Allowable Diameter
Top 4 inches	1 inch
4 inches to 12 inches	3-1/2 inches
12 inches to 2 feet	6 inches
2 feet to 4 feet	12 inches
4 feet to 8 feet	24 inches
Below 8 feet	36 inches

- B. Embankments shall be constructed of material containing no muck, stumps, roots, brush, vegetable matter, rubbish or other material that will not compact into a suitable and enduring roadbed, and material designated as undesirable shall be removed from the site. Where embankments are constructed adjacent to bridge end bents or abutments, rock larger than 3-1/2 inches in diameter shall not be placed within three feet of the location of any abutment.
- C. Fill material containing debris, sod, biodegradable materials shall not be used as fill in construction areas.
- D. Fill material required for the building pads and for pavement sub-grade shall be granular fill, free of organic material.
- E. Fill material required for pervious and sodded areas shall have a maximum organic component of 10%. CONTRACTOR shall provide, at their cost, organic content test results for approval by the ENGINEER.

PART 3 - EXECUTION

3.01 JOB CONDITIONS

A. Protection: Use all means necessary to protect existing objects and vegetation. In the event of damage, immediately make all repairs and replacements necessary to the acceptance of the OWNER's Representative and ENGINEER at no cost to the OWNER.

3.02 BACKFILL, FILLING & GRADING

A. Grades:

- 1. Cut, backfill, fill and grade to proper grade levels indicated. The proposed grades shown on the drawings are for establishing a finished grade over the site.
- B. Filling:

- 1. Fill material shall be placed in horizontal layers and spread to obtain a uniform thickness.
- 2. After compaction, layers of fill are not to exceed twelve (12) inches for cohesive soils or eight (8) inches for noncohesive soils.

3.03 STRUCTURE, ROADWAY, AND EMBANKMENT EXCAVATION

- General: Except when specifically provided to the contrary, excavation shall A. include the removal of all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution and completion of the WORK. The removal of said materials shall conform to the lines and grades shown and ordered. Unless otherwise provided, the entire construction site shall be stripped of all vegetation and debris, and such material shall be removed from the site prior to performing any excavation or placing any fill. The CONTRACTOR shall furnish, place, and maintain all supports and shoring that may be required for the sides of the excavations, and all pumping, ditching, or other measure for the removal or exclusion of water, including taking care of storm water, groundwater, and wastewater reaching the site of the work from any source so as to prevent damage to the work or adjoining property. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926), latest edition.
- B. Excavation beneath Structures and Embankments: Except where otherwise specified for a particular structure or ordered by the ENGINEER, excavation shall be carried to the grade of the bottom of the footing or slab. Where shown or ordered, areas beneath structures or fill shall be over-excavated. The sub-grade areas beneath embankments shall be excavated to remove not less than the top [6 inches] of native material and where such sub-grade is sloped; the native material shall be benched. After the required excavation or over-excavation has been completed, the exposed surface shall be scarified to a depth of 6 inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density.
- C. Excavation beneath Paved Areas: Excavation under area to be paved shall extend to the bottom of the aggregate based or sub-base, if such base is called for; otherwise it shall extend to the paving thickness. After the required excavation has been completed, the top 12 inches of exposed surface shall be scarified, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density. The finished sub-grade shall be even, self-draining, and in conformance with the slope of the finished pavement. Areas that could accumulate standing water shall be regraded to provide a self-draining sub-grade.

D. Notification of ENGINEER: The CONTRACTOR shall notify the ENGINEER at least 3 days in advance of completion of any structure excavation and shall allow the ENGINEER a review period of at least one day before the exposed foundation is scarified and compacted or is covered with backfill or with any construction materials.

3.04 PIPELINE AND UTILITY TRENCH EXCAVATION

- A. General: Unless otherwise shown or ordered, excavation for pipelines and utilities shall be open-cut trenches. Trench widths shall be kept as narrow as is practical for the method of pipe zone densification selected by the CONTRACTOR, but shall have a minimum width at the bottom of the trench equal to the outside diameter of the pipe plus 24 inches for mechanical compaction methods and 18 inches for water consolidation methods. The maximum width at the top of the pipe shall be equal to the outside diameter of the pipe plus 36 inches for pipe diameters 18 inches and larger and to the outside diameter of the pipe plus 24 inches for pipe diameters less than 18 inches, or as shown on the Drawings.
- B. Trench Bottom: Except when pipe bedding is required, the bottom of the trench shall be excavated uniformly to the grade of the bottom of the pipe. The trench bottom shall be given a final trim, using a string line for establishing grade, such that each pipe section when first laid will be continually in contact with the ground along the extreme bottom of the pipe. Rounding out the trench to form a cradle for the pipe will not be required. Excavations for pipe bells and welding shall be made as required.
- C. Open Trench: The maximum amount of open trench permitted in any one location shall be 100 feet, unless permitted by the ENGINEER. All trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day. The above requirements for backfilling or use of steel plate will be waived in cases where the trench is located further than 100 feet from any traveled roadway or occupied structure. In such cases, however, barricades and warning lights meeting OSHA requirements shall be provided and maintained.
- D. Trench Over-Excavation: Where the Drawings indicate that trenches shall be over-excavated, they shall be excavated to the depth shown, and then backfilled to the grade of the bottom of the pipe.
- E. Over-Excavation: When ordered by the ENGINEER, whether indicated on the Drawing or not, trenches shall be over-excavated beyond the depth shown. Such over-excavation shall be to the depth ordered. The trench shall then be backfilled to the grade of the bottom of the pipe. All work specified in this Section shall be performed by the CONTRACTOR when the over-excavation ordered by the

ENGINEER is less than 6 inches below the limits shown. When the over-excavation ordered by the ENGINEER is 6 inches or greater below the limits shown additional payment will be made to the CONTRACTOR for that portion of the work which is located below said 6-inch distance.

F. Where pipelines are to be installed in embankment or structure fills, the fill shall be constructed to a level at least one foot above the tip of the pipe before the trench is excavated.

3.05 OVER-EXCAVATION NOT ORDERED, SPECIFIED, OR SHOWN

A. Any over-excavation carried below the grade ordered, specified, or shown, shall be backfilled to the required grade with the specified material and compaction. Such work shall be performed by the CONTRACTOR at its own expense.

3.06 EXCAVATION IN LAWN AREAS.

A. Where excavation occurs in lawn areas, the sod shall be carefully removed, kept damp, and stockpiled to preserve it for replacement. Excavated material may be placed on the lawn; provided that a drop cloth or other suitable method is employed to protect the lawn from damage. The lawn shall not remain covered for more than 72 hours. Immediately after completion of backfilling and testing of the pipeline, the sod shall be replaced and lightly rolled in a manner so as to restore the lawn as near as possible to its original condition. CONTRACTOR shall provide new sod if stockpiled sod has not been replaced within 72 hours.

3.07 EXCAVATION IN VICINITY OF TREES

A. Except where trees are shown to be removed, trees shall be protected from injury during construction operations. No tree root over 2 inches in diameter shall be cut without express permission of the ENGINEER. Trees shall be supported during excavation by any means previously reviewed by the ENGINEER.

3.08 ROCK EXCAVATION

- A. Rock excavation shall include removal and disposal of the following: (1) all boulders measuring 1/3 of a cubic yard or more in volume; (2) all rock material in ledges, bedding deposits, and unstratified masses which cannot be removed without systematic drilling and blasting; (3) concrete or masonry structures which have been abandoned; and (4) conglomerate deposits which are so firmly cemented that they possess the characteristics of solid rock and which cannot be removed without systematic drilling and blasting.
- B. Said rock excavation shall be performed by the CONTRACTOR; provided, that should the quantity of rock excavation be affected by any change in the scope of WORK, an appropriate adjustment of the contract price will be made under a separate bid item if such bid has been established; otherwise payment will be made in accordance with a negotiated price.
- C. Explosives and Blasting: Blasting will not be permitted.

3.09 <u>DISPOSAL OF EXCESS EXCAVATED MATERIAL</u>

A. The CONTRACTOR shall remove and dispose of all excess excavated material at a site selected by the CONTRACTOR and reviewed by the ENGINEER.

3.10 <u>DISPOSAL OF UNSUITABLE EXCAVATED MATERIAL</u>

A. The CONTRACTOR shall remove and dispose of all unsuitable material. This shall include muck, tree roots, rocks, garbage, debris, or any other material designated as unsuitable by Paragraph 2 of this Section. Disposal shall be at a site selected by the CONTRACTOR that is designated as an approved disposal site for the unsuitable material.

3.11 BACKFILL - GENERAL

- A. Backfill shall not be dropped directly upon any structure or pipe. Backfill shall not be placed around nor upon any structure until the concrete has attained sufficient strength to withstand the loads imposed. Backfill around water retaining structures shall not be placed until the structures have been tested, and the structures shall be full of water while backfill is being placed.
- B. Except for drainrock materials being placed in over-excavated areas or trenches, backfill shall be placed after all water is removed from the excavation.

3.12 PLACING AND SPREADING OF BACKFILL MATERIALS

- A. Backfill materials shall be placed and spread evenly in layers. When compaction is achieved using mechanical equipment the layers shall be evenly spread so that when compaction is complete, each layer shall not exceed 6 inches in thickness.
- B. During spreading each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer. Pipe zone backfill materials shall be manually spread around the pipe so that when compacted, the pipe zone backfill will provide uniform bearing and side support.
- C. Where the backfill material moisture content is below the optimum moisture content water shall be added before or during spreading until the proper moisture content is achieved.
- D. Where the backfill material moisture content is too high to permit the specified degree of compaction the material shall be dried until the moisture content is satisfactory.

3.13 COMPACTION - GENERAL

- A. Compact each layer of fill in designated areas with approved equipment to achieve a maximum density at optimum moisture, AASHTO T 180 latest edition.
 - 1. Building Pads: compaction shall be to 98% of maximum density, unless otherwise shown on the drawings or specifications. Building pads shall be within plus or minus one-tenth (0.1) of a foot of the elevations shown on the plans.
 - 2. Refer to Sections 02513 Asphaltic Concrete Paving and 02515 Portland Cement Concrete Paving for compaction requirements in the affected areas.
 - 3. Under landscaped area, compaction shall be to 85% of maximum density, unless otherwise shown on the drawings.
- B. No backfill shall be placed against any masonry or other exposed building surface until permission has been given by the OWNER's Representative, and in no case until the masonry has been in place seven days.
- C. Heavy construction equipment will not be permitted within ten (10) feet of any masonry or other exposed building surface.
- D. Compaction in limited areas shall be obtained by the use of mechanical tampers or approved hand tampers. When hand tampers are used, the materials shall be deposited in layers not more than four inches thick. The hand tampers used shall be suitable for this purpose and shall have a face area of not more than 100 square

inches. Special precautions shall be taken to prevent any wedging action against masonry, or other exposed building surfaces.

3.14 COMPACTION OF FILL, BACKFILL, AND EMBANKMENT MATERIALS

- A. Each layer of Types A, B, C, G, H, I, and K backfill materials as defined herein, where material is graded such that at least 10 percent passes a No. 4 sieve, shall be mechanically compacted to the specified percentage of maximum density. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content.
- B. Each layer of Type D, E, F, and J backfill materials shall be compacted by means of at least 2 passes from a flat plate vibratory compactor. When such materials are used for pipe zone backfill, vibratory compaction shall be used at the top of the pipe zone or at vertical intervals of 24 inches, whichever is the least distance from the sub-grade.
- C. Type L material requires mechanical spreading and placement to fill voids but does not require mechanical compaction or vibration.
- D. Flooding, pounding, or jetting shall not be used for fill on roofs, backfill around structures, backfill around reservoir walls, for final backfill materials, or aggregate base materials.
- E. Pipe zone backfill materials that are granular, may be compacted by a combination of flooding and vibration using concrete vibrators or by jetting, when acceptable to the ENGINEER.
- F. Pipeline trench zone backfill materials, containing 5 percent or less of material passing a No. 200 sieve, may be compacted using flooding and jetting or vibration if the CONTRACTOR uses effective procedures that yield the specified compaction test results. Flooding and jetting shall not be done in such a manner that the pipe or nearby utilities are damaged, in areas of poorly draining or expansive soils, or where the use of the procedure is prohibited by any agency having jurisdiction over the street or right-of-way. Approved jet pipes or immersible vibrators shall be used so that each backfill layer is saturated and consolidated to its full depth before the next layer is placed. Jet pipes shall be kept at least 6 inches away from the pipe where the backfills being consolidated and 2 feet away from other pipes or utilities.
- G. Equipment weighing more than 10,000 pounds shall not be used closer to walls than a horizontal distance equal to the fill at that time. Hand operated power compaction equipment shall be used where use of heavier equipment is impractical or restricted due to weight limitations.

Percentage of

H. Compaction Requirements: The following compaction test requirements shall be in accordance with ASSHTO T-99-C. Where agency or utility company requirements govern, the highest compaction standards shall apply.

Location or Use of Fill	Maximum Density
Pipe zone backfill portion above bedding for flexible pipe.	95
Pipe zone backfill bedding and over-excavated zones under bedding/pipe for flexible pipe, including trench plugs.	95
Pipe zone backfill portion above bedding for rigid pipe	95
Pipe zone backfill bedding and over-excavated zones under bedding/pipe for rigid pipe.	95
Final backfill, beneath paved areas or structures	100
Final backfill, not beneath paved areas or structures	95
Trench zone backfill, not beneath paved areas or structures, including trench plugs	95
Embankments	98
Embankment, beneath paved areas or structures	100
Backfill beneath structures, hydraulic structures	100
Backfill around structures	98
Topsoil (Type K material)	80
Aggregate base or sub base(Type G or M material)	100
Trench Backfill Requirements: the pine has been structura	lly designed based

- J. Trench Backfill Requirements: the pipe has been structurally designed based upon the trench configuration specified herein.
- K. The CONTRACTOR shall maintain the indicated trench cross-section up to a horizontal plane lying 6 inches above the top of pipe.
- L. If, at any location under said horizontal plane, the CONTRACTOR slopes the trench walls or exceeds the maximum trench widths indicated in the Contract

Documents, the pipe zone backfill shall be "improved" or the pipe class increase as specified herein, at no additional cost to the OWNER. "Improved" backfill shall mean sand-cement backfill or other equivalent materials acceptable to the ENGINEER.

M. If the allowable deflection specified for the pipe is exceeded, the CONTRACTOR shall expose and re-round or replace the pipe, repair all damaged lining and coating, and reinstall the pipe zone material and trench backfill as specified at no additional expense to the OWNER.

3.14 PIPE AND UTILITY TRENCH BACKFILL

- A. Pipe Zone Backfill: The pipe zone is defined as that portion of the vertical trench cross-section lying between a plane 6 inches below the bottom surface of the pipe, i.e., the trench sub-grade, and a plane at a point 6 inches above the top surface of the pipe. The bedding for flexible pipe is defined as that portion of pipe zone backfill material between the trench sub-grade and the bottom of the pipe. The bedding for rigid pipe is defined as that portion of the pipe zone backfill material between the trench sub-grade and a level line, which varies from the bottom of the pipe to the springline as shown.
- B. Bedding shall be provided for all sewers, drainage pipelines, and other gravity flow pipelines. Unless otherwise specified or shown, for other pipelines the bedding may be omitted if all the following conditions exist.
 - 1. The pipe bears on firm, undisturbed native soil which contains only particles that will pass a one-inch sieve.
 - 2. The trench excavation is not through rock or stones.
 - 3. The trench sub-grade soils are classified as suitable fill and backfill materials per Paragraph 2.01.
 - 4. The trench sub-grade soils have, as a maximum, a moisture content that allows compaction.
- C. Where bedding is required, after compacting the bedding, the CONTRACTOR shall perform a final trim using a stringline for establishing grade, such that each pipe section when first laid will be continually in contact with the bedding along the extreme bottom of the pipe. Excavation for pipe bells and welding shall be made as required.
- D. Trench Zone Backfill: After the pipe zone backfill has been placed as specified above, and after all excess water has completely drained from the trench, backfilling of the trench zone may proceed. The trench zone is defined as that portion of the vertical trench cross-section lying between a plane 6 inches above

the top surface of the pipe and a plane at a point 18 inches below the finished surface grade, or if the trench is under pavement, 18 inches below the roadway sub-grade. If flooding, ponding, or jetting is used the pipe shall be filled with water to prevent flotation.

E. Final Backfill: Final backfill is all backfill in the trench cross-sectional area within 18 inches of finished grade, or if the trench is under pavement, all backfill within 18 inches of the roadway sub-grade.

3.15 EMBANKMENT CONSTRUCTION

- A. The area where an embankment is to be constructed shall be cleared of all vegetation, roots and foreign material. Following this, the surface shall be moistening, scarified to a depth of 6 inches, and rolled or otherwise mechanically compacted. Embankment fill material shall be placed and spread evenly in approximately horizontal layers. Each layer shall be moistened or aerated, as necessary. Unless otherwise approved by the ENGINEER, each layer shall not exceed 6 inches of compacted thickness. The embankment fill and the scarified layer of underlying ground shall be compacted to 95 percent of maximum density under structures and paved areas, and 90 percent of maximum density elsewhere.
- B. When an embankment fill is to be made and compacted against hillsides or fill slopes steeper than 4:1, the slopes of hillsides or fills shall be horizontally benched to key the embankment fill to the underlying ground. A minimum of 12 inches normal to the slope of the hillside or fill shall be removed and recompacted as the embankment fill is brought up in layers. Material thus cut shall be recompacted along with the new fill material at the CONTRACTOR'S expense. Hillside of fill slopes 4:1 or flatter shall be prepared in accordance with Paragraph A, above.
- C. Where embankment or structure fills are constructed over pipelines, the first 4 feet of fill over the pipe shall be constructed using light placement and compaction equipment that does not damage the pipe. Heavy construction equipment shall maintain a minimum distance from the edge of the trench equal to the depth of the trench until at least 4 feet of fill over the pipe has been completed.

3.16 CORRECTION OF GRADE

A. Bring to required grade level areas where settlement, erosion or other grade changes occur.

3.17 MAINTENANCE AND PROTECTION OF WORK

A. While construction is in progress adequate drainage for the roadbed shall be maintained at all times.

The CONTRACTOR shall maintain all earthwork construction throughout the life of the contract, unless otherwise provided, and shall take all reasonable precautions to prevent loss of material from the roadway due to the action of wind or water. CONTRACTOR shall repair at their expense, except as otherwise provided herein, any slides, washouts, settlement, subsidence, or other mishap, which may occur prior to final acceptance of the WORK.

All channels excavated as a part of the contract WORK shall be maintained against natural shoaling or other encroachments to the lines, grades, and cross sections shown on the plans, until final acceptance of the project.

3.18 AS-BUILT SURVEY

- A. At the completion of the WORK and prior to final inspection of the area, the CONTRACTOR shall provide the ENGINEER with an as-built topographic survey made by a registered Surveyor, of the State of Florida.
- B. The surveyor is to certify on the survey whether or not the as-built conditions conform to the elevations shown on the Drawings to within plus or minus one-tenth (.1) of a foot.

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 02220: Trenching, Backfilling and Compacting.
- C. Section 02260: Finish Grading.
- D. 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 appurtenances which are to remain.
- D. Repair any damage, at no cost to Owner.

SITE GRADING 02211-1

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.

SITE GRADING 02211-2

PROJECT # 12166

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. (See Specification 02212 for Athletic Field Site Grading)
 - 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

SITE GRADING 02211-3

SECTION 02220 TRENCHING, BACKFILLING AND COMPACTING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Excavate for all underground piping.
- B. Place and compact granular beds and fills over pipelines to rough grade elevations.
- C. Dewater excavations as required.

1.02 RELATED WORK

- A. Section 02661: Water Mains.
- B. Section 02720: Storm Drainage System.
- C. Section 02730: Sanitary Sewer Pipe.

1.03 <u>SITE COMPACTION TESTING</u>

- A. Testing of compacted fill materials will be performed in accordance with F.D.O.T. and A.A.S.H.T.O. specifications.
- B. If, during progress of Work, tests indicate that compacted materials do not meet specified requirements, remove defective work, replace and retest as directed by ENGINEER.
- C. Ensure compacted fills are tested before proceeding with placement of surface materials.

1.04 PROTECTION

- A. Protect trees, shrubs, lawn, areas to receive planting, rock outcropping and other features remaining as part of final landscaping.
- B. Protect bench marks and existing structures, roads, sidewalks, paving and curbs against damage from vehicular or foot traffic. Install and maintain proper bridging, planking and cants to provide access to buildings.

TRENCHING, BACKFILLING AND COMPACTING

02220-1

- C. Protect excavations by shoring, bracing, sheet piling underpinning, or by other methods, as required to prevent cave-ins or loose dirt from falling into excavations in accordance with Trench Safety Act.
- D. Underpin or otherwise support adjacent structure(s) which may be damaged by excavation work. This includes other utility lines and pipe runs.
- E. Notify ENGINEER of any unexpected sub-surface conditions. Discontinue work in the area until ENGINEER provides notification to resume work.

PART 2 - PRODUCTS

2.01 PRODUCTS

- A. Bedding Materials: Pipe shall be placed on dry, undisturbed earth.
- B. Selected Backfill: After pipe joints have been inspected and given preliminary approval, and sufficient time has elapsed for setting of joints if necessary, backfilling shall be performed, together with tamping until fill has progressed to an elevation at least one foot above the top of the pipe bell. During this initial stage of backfilling, approved granular materials or loose soil free from lumps, clods, or stones shall be deposited in layers approximately 6-inches thick and compacted by manually operated machine tampers actuated by compressed air, or other suitable means. Tampers and machines shall be suitable for the work, and subject to approval by ENGINEER.
- C. Backfill Material: Excavated material, free from roots, rocks larger than 3½ inches in size and building debris.
- D. Fill under landscaped areas: Free from alkali, salt, and petroleum products. Use sub-soil excavated from site only if conforming to specified requirements.

PART 3 - EXECUTION

3.01 PREPARATION AND LAYOUT

- A. Establish extent of excavation by area and elevation. Designate and identify datum elevation.
- B. Set required lines and levels.
- C. Maintain bench marks, monuments and other reference points.

3.02 <u>UTILITIES</u>

- A. Before starting excavation, establish the location and extent of underground utilities occurring in the work area.
- B. Notify ENGINEER if utility lines which are in the way of excavation are uncovered.
- C. Protect active utility services uncovered by excavation.
- D. Remove abandoned utility service lines from areas of excavation. Cap, plug or seal such lines and identify at grade.
- E. Accurately locate and record abandoned and active utility lines re-routed or extended on Project Record Documents.

3.03 TRENCHING

- A. Ensure trenching does not interfere with normal 45 degree bearing angle of any foundation.
- B. Excavate in accordance with lines and grades.
- C. Cut trenches sufficiently wide to enable proper installation of pipe and to allow for inspection. Trim and shape trench bottom and leave free of irregularities, lumps and projections.
- D. Do not disturb soil within branch spread of existing trees or shrubs that are to remain. If it is necessary to excavate through roots, perform work by hand and cut roots with a sharp axe.
- E. When complete, request ENGINEER to inspect excavations. Correct unauthorized excavation as directed, at no cost to OWNER.
- F. Remove excess or unsuitable excavated sub-soil from site.

3.04 DEWATERING

- A. Keep trenches dry. Provide necessary equipment including pumps, piping and temporary drains.
- B. Do not discharge drainage water into municipal sewers without municipal approval. Ensure water discharge does not contain silt held in suspension.
- C. Direct surface drainage away from excavated areas.
- D. Control the grading in and adjacent to excavations to prevent water running into excavated areas or onto adjacent properties or public thoroughfares.

TRENCHING, BACKFILLING AND COMPACTING

02220-3

PROJECT # 12166

- E. Furnish and operate suitable pumps on a 24 hour basis to keep excavations free of water until piping has been placed and backfilling has been completed.
- F. No water shall be allowed to rise over masonry or mortar until the concrete or mortar has set at least 24 hours.

3.05 BACKFILLING

- A. Do not start backfilling until piping has been inspected.
- B. Ensure trenches are free of building debris, wood, rocks over 3½ inches in diameter and water.
- C. Backfill systematically and as early as possible to allow maximum time for natural settlement and compaction.
- D. After backfill has reached a point one foot above the top of the pipe, a variation in the procedure as to manner of placing and amount of compaction to fill will be allowed, depending upon the location of the work and danger from subsequent settlement, as follows:
 - 1. For backfilling in unimproved areas (along utility easements and in parkway strip beyond the edge of driveways and graveled parking areas), from an elevation of one foot above top of pipe to the surface of the ground, backfill may be deposited by equipment. Depositing in layers or tamping will not be required. Sufficient surplus excavated material shall be neatly rounded over the trench, to compensate for settlement. All surplus excavated materials beyond that indicated above shall be disposed of by Contractor.
 - 2. For backfilling beneath driveways and parking areas, alleys, and streets where non-rigid type surfacing is to be replaced. This shall also include dirt, gravel or asphalt driveways and alleys.
 - a. The backfill material shall be carefully deposited in uniform layers not to exceed 12-inches in thickness and each layer shall be compacted to 98% of maximum density in accordance with AASHTO T-180 with manually operated machine tampers.
 - b. In lieu of the foregoing compaction method, the backfill material and procedure used may be that as specified under Method 3, below.
 - 3. For backfilling across and beneath driveways, sidewalks, parking areas or streets where a rigid type paving is to be replaced (concrete and asphaltic concrete and brick surfaces).
 - a. All backfill material shall be approved granular material of high weight and density. The material shall be carefully deposited in uniform layers not to exceed 12-inches thick (loose measure), and each layer shall be compacted by ramming or tamping with tools approved by ENGINEER in a manner that does not disturb the pipe.

PROJECT # 12166

Where necessary, granular base material of the type and thickness specified shall be used for the last layer prior to surfacing.

END OF SECTION

TRENCHING, BACKFILLING AND COMPACTING

02220-5

SECTION 02260 FINISH GRADING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall, under this Section, supply, place, and 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 02211: Site Grading.
- B. Section 02220: Trenching, Backfilling and Compacting.
- C. Section 02920: Sodding.
- D. Section 02950: Trees, Plants and Ground Cover.

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.)

FINISH GRADING 02260-1

PART 3 - EXECUTION

3.01 <u>SUB-SOIL PREPARATION</u>

- 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 <u>SURPLUS MATERIAL</u>

A. Remove surplus sub-soil and topsoil from site.

FINISH GRADING 02260-2

SISTRUNK PARKING LOT

PROJECT # 12166

B. Leave stockpile areas and entire job site clean and raked, ready to receive landscaping.

END OF SECTION

FINISH GRADING 02260-3

SECTION 02511 CONCRETE SIDEWALKS

PART 1 - GENERAL

1.01 SCOPE

A. The work specified in this section consists of the construction of concrete sidewalks, in accordance with these specifications, and in conformity with the lines, grades, dimensions and notes shown on the plans.

1.02 REFERENCES

- A. City of Fort Lauderdale Standards
- B. FDOT Standard Specifications for Road and Bridge Construction, latest edition

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The concrete mix shall produce standard weight concrete with the following properties to be verified by the use of the appropriate listed test methods.
 - 1. Compressive strength: 3,000 psi at 28 days tested according to ASTM designation C31 (AASHTO T23)
 - 2. Slump Range: 2-4 inches tested according to ASTM designation C143 (AASHTO T119)
- B. Joint materials shall be in accordance with FDOT Specification Section 932.

2.02 FORMS

A. Forms for this work shall be made of either wood or metal and shall have a depth equal to the plan dimensions for the depth of concrete being deposited against them. They shall be straight, free from warp or bends, and of sufficient strength, when staked to resist the pressure of the concrete without deviation from line and grade. Forms shall be cleaned each time they are used and shall be oiled or saturated with water prior to placing the concrete.

CONCRETE SIDEWALKS

PART 3 - EXECUTION

3.01 SUB-GRADE

A. Excavation shall be made to the required depth and the sub-grade or base upon which the sidewalk is to be set shall be compacted to a firm, even surface, true to grade and cross-section, by means of watering, rolling or tamping. The sub-grade for sidewalk to be used as driveway pavement shall be compacted as called for on the plans. The sub-grade shall be moist at the time the concrete is placed.

3.02 JOINTS

- A. Expansion Joints between the sidewalk and the curb or driveway or at fixed objects and sidewalk intersections shall be 1/2 inch joints, formed with preformed joint filler.
- B. Preformed Filler shall meet the requirements of AASHTO M-153 or M-213, or cellulose fiber types meeting all the requirements of AASHTO M-213 except the asphalt content are acceptable provided they contain minimums of 0.2 percent copper pentachlorophenate as a preservative and 1.0 percent waterproofing wax. For AASHTO M-153, unless a particular type is specified; either type I, type II, or type III may be used
- C. Contraction Joints may be of the open type, or may be sawed.
 - 1. Open type contraction joints shall be formed by staking a metal bulkhead in place and depositing the concrete on both sides. After the concrete has set sufficiently to preserve the width and shape of the joint, the bulkhead shall be removed. After the sidewalk has been finished over the joint, the slot shall be edged with a tool having a 1/2" radius.
 - 2. If the Contractor elects to saw the contraction joints, a slot approximately 3/16" wide and not less than 1-1/2" deep shall be cut with a concrete saw after the concrete has set and within the following periods of time: Joints at not more than 30' intervals 12 hrs after finishing, and remaining joints within 96 hrs after finishing.

3.03 PLACING

A. The concrete shall be placed in the forms to the required depth, and shall be tamped and spaded until mortar entirely covers its surface.

3.04 FINISHING

- A. SCREEDING: All surplus water, laitance and inert material shall be worked off the surface of the concrete with a ten (10) foot straight edge, or by some other method equally as satisfactory and so approved by the Engineer.
- B. FLOATING; SURFACE REQUIREMENTS: The concrete shall be given a wooden float finish. The surface variations shall not be more than three-sixteenths (3/16) inch under a ten (10) foot straight edge, nor more than one-eighth (1/8) inch on a five (5) foot transverse section. The edge of the sidewalk shall be carefully finished with an edging tool having a radius of one-half (1/2) inch.

3.06 THICKNESS

Concrete sidewalks shall be four (4) inches thick or as detailed on the plans.

END OF SECTION

SECTION 02513 ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Prepare sub-grade to receive base course.
- B. Place stabilizing base courses work and compact.
- C. Prime base course, place asphalt pavement.

1.02 <u>RELATED WORK</u>

- A. Section 01410: Testing Laboratory Services.
- B. Section 02211: Site Grading.
- C. Section 02580: Pavement Markings and Post Signs.

1.03 REFERENCE STANDARDS

- A. ASTM D1557 Tests for Moisture Density Relationship of Soils using 10 lb. rammer in 18 inch Drop.
- B. AASHTO M-81 Penetration Graded Asphalt Cement.
- C. AASHTO M-140 Emulsified Asphalt.
- D. FDOT Road & Bridge Construction Section 200 Limerock Base
- E. FDOT Road and Bridge Construction Section 250 Shell Base.
- F. FDOT Road and Bridge Construction Section 250 Shell Stabilized Base.
- G. FDOT Road and Bridge Construction Section 330 Hot Bituminous Mixtures General Construction Requirements.
- H. FDOT Road and Bridge Construction Section 916-1 Asphalt Cement.

1.04 TESTING AND INSPECTION

- A. Testing and inspection of asphalt pavement mixes and testing of placed stabilizing base course and asphalt pavement will be performed by an independent testing laboratory, in accordance with Section 01410-Testing Lab Services. Testing and inspection will be performed so as to minimize disruption to work.
- B. Allow testing laboratory access to the mixing plant for verification of weights or proportions, character of materials used and determination of temperatures used in the preparation of asphalt concrete mix.
- C. When and if required, the testing laboratory will perform laboratory tests on proposed asphalt pavement mixes to determine conformity with requirements.
- D. The testing laboratory will perform one series of compaction tests for stabilizing base course and for asphalt pavement. The contractor shall pay for costs of additional testing as required due to improper performance of work.
- E. When stabilizing base course or portion thereof has been placed and compacted in accordance with requirements, notify the testing laboratory to perform density and bearing value tests. Do not place asphalt pavement until results have been verified and base course installation approved.
- F. If compaction tests indicate that stabilizing base course or asphalt paving do not meet specified requirements, remove defective work, replace and retest at Contractor's expense.

PART 2 - MATERIALS

2.01 LIMEROCK

- A. Composition The minimum percentage of carbonates of calcium and magnesium in the limerock material shall be 70. The maximum percentage of water-sensitive clay mineral shall be 3 percent. Limerock material shall not contain cherty or other extremely hard pieces, or lumps, balls or pockets of sand or clay size material in sufficient quantity as to be detrimental to the proper bonding, finishing, or strength of the limerock base.
- B. Gradation and Size Requirements At least 97 percent (by weight of the material shall pass a 3½ inch sieve and the material shall be graded uniformly down to dust. The fine material shall consist entirely of dust of fracture. All crushing or breaking-up which might be necessary in order to meet such size requirements shall be done before the material is placed on the road.

C. Limerock Bearing Requirements - Limerock material used in construction of limerock base shall have an average LBR value of not less than 100. The average LBR value of material produced at a particular source shall be determined in accordance with an approved quality control procedure.

2.02 PRIME COAT

- A. Prime coat shall be one of the following:
 - 1. Cutback Asphalt, Grade RC-70 or RC-250 shall meet the requirements of AASHTO Specification M-81.
 - 2. Emulsified Asphalt Grade SS-1 or SS1H shall meet the requirements of ASSHTO Specifications M-140 and/or M-280.

2.03 TACK COAT

- A. Tack coat shall be one of the following:
 - 1. Asphalt Cement, Penetration Grade 85-100 shall meet the requirements of AASHTO Specification M-20.
 - 2. Emulsified Asphalt, Grade RS-2 shall meet the requirements of AASHTO Specification M-140.

2.04 ASPHALTIC CONCRETE

A. Asphaltic concrete surface course - Type S-III asphaltic concrete wearing surface, 1½ inches in compacted thickness or as indicated on the Drawings, in accordance with Sections 330-10 Compacting Mixture and 331 Type S-III Asphaltic Concrete of aforesaid DOT Standard Specification.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Subgrade shall be stabilized per Section 160 Stabilizing, of the FDOT Standard Specifications.
- B. Bearing Value Requirements for subgrade stabilization
 - 1. Limerock Bearing Ratio Minimum LBR 40 under paved and curbed areas, and minimum LBR 30 in shoulder and swale areas.

2. Florida Bearing Value - Minimum FBV 75 pounds per square inch (psi) under paved and curbed areas, and minimum FBV 50 psi in shoulder and swale areas.

3.02 TRANSPORTING BASE COURSES

The limerock shall be transported to the point where it is to be used, over rock previously placed if practicable, and dumped on the end of the preceding spread. Hauling over the subgrade and dumping on the subgrade will be permitted when these operations will not be detrimental to the base as determined by the Engineer.

3.03 EQUIPMENT

- A. Base Course The rock shall be spread by mechanical rock spreaders, equipped with a device which strikes off the rock uniformly to laying thickness, and capable of producing an even distribution of the rock.
- B. Pressure Distributor The pressure distributor shall be equipped with pneumatic tires having a sufficient width of rubber in contact with the road surface to avoid breaking the bond or forming a rut in the surface. The distance between the centers of openings of the outside nozzles of the spray bar shall be equal to the width of the application required, within an allowable variation of two (2) inches.

3.04 SPREADING BASE COURSE

- A. Method of Spreading The limerock shall be spread uniformly with equipment as specified in 3.02 above. All segregated areas of fine or coarse rock shall be removed and replaced with properly graded rock.
- B. Number of Courses When the specified compacted thickness of the base is greater than six inches, the base shall be constructed in two courses. The thickness of the first course shall be approximately one-half the total thickness of the finished base, or enough additional to bear the weight of the construction equipment without disturbing the subgrade.

3.05 COMPACTING AND FINISHING BASE

A. Single-Course Base - For single-course base, after the spreading is completed the entire surface shall be scarified and then shaped so as to produce the required grade and cross section after compaction.

- B. Moisture Content When the material does not have the proper moisture content to insure the required density, wetting or drying will be required. When water is added it shall be uniformly mixed-in by disking to the full depth of the course which is being compacted. Wetting or drying operations shall involve manipulation, as a unit, of the entire width and depth of the course which is being compacted.
- C. Density Requirements As soon as proper conditions of moisture are attained the material shall be compacted to a density of not less than 98 percent of maximum density as determined by AASHTO T-180.
- D. Density Test At least three density determinations shall be made on each day's final compaction operations on each course, and the density determinations shall be made at more frequent intervals if deemed necessary by the Engineer. During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross section, the compacting operations for such areas shall be completed prior to making the density tests on the finished base.

E. Correction of Defects:

- 1. Contamination of Base Material If, at any time, the subgrade material should become mixed with the base course material, the Contractor shall, without additional compensation, dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean base material, which shall be shaped and compacted as specified above.
- 2. Cracks and Checks If cracks or checks appear in the base, either before or after priming, which, in the opinion of the Engineer, would impair the structural efficiency of the base, the Contractor shall remove the cracks or checks by rescarifying, reshaping, adding base material where necessary, and recompacting.
- H. Surface Testing The finished surface of the base course shall be checked with a template cut to the required crown and with a 15 foot straightedge laid parallel to the center line of the road. All irregularities greater than ¼ inch shall be corrected by scarifying and removing or adding base course material as required, after which the entire area shall be recompacted.

3.06 PRIMING

A. Preparation - The prime coat shall be applied only when the base meets the specified density requirements and the moisture content in the top half of the base does not exceed 90 percent of the optimum moisture of the base material. At the time of priming, the base shall be firm, unyielding and in such condition that no undue distortion will occur.

Before any bituminous material is applied, all loose material, dust, dirt, caked clay and other foreign material which might prevent proper bond with the existing surface shall be removed for the full width of the application. Particular care shall be taken in cleaning the outer edges of the strip to be treated, to insure that the prime or tack coat will adhere.

When the prime or tack coat is applied adjacent to curb and gutter, valley gutter or any other concrete surfaces, such concrete surfaces (except where they are to be covered with a bituminous wearing course) shall be covered with heavy paper, or otherwise protected while the prime or tack coat is being applied. Any bituminous material deposited on such concrete surfaces shall be removed.

The temperature of the prime material shall be between 100 degrees Fahrenheit and 150 degrees Fahrenheit. The actual temperature shall be that which will insure uniform distribution. The material shall be applied by means of a pressure distributor. The amount to be applied will be dependent on the character of the surface and shall be sufficient to coat the surface thoroughly and uniformly, with no excess.

- B. Rate of Application The rate of application shall be not less than 0.10 gallon per square yard, unless a lower rate is approved by the Engineer.
- C. Sprinkling If so required by the Engineer the base shall be lightly sprinkled with water and rolled with a traffic roller, in advance of the application of the prime.
- D. Sanding The primed base shall be covered by a light uniform application of cover material. If considered necessary for proper distribution of spread, the cover material shall be lightly dragged with a drag broom, after which it shall be rolled with a traffic roller.
- E. Sampling Device on Transport Tanks All transport tanks delivering bituminous materials for use on the project shall be equipped with an approved spigot-type sampling device.
- F. Temperature Sensing Device on Transport Tanks All transport tanks delivering bituminous materials shall be equipped with an approved dial type thermometer. The thermometer shall have a temperature range from 50 degrees Fahrenheit to 500 degrees Fahrenheit in 25 degrees Fahrenheit increments with a minimum dial diameter of two inches.

3.07 QUALITY CONTROL

A. Testing Surface - The finished surface of the base course shall be checked with a template cut to the required crown and with a 15-foot straightedge laid parallel to the centerline of the road. All irregularities greater than ¼ inch shall be corrected by

scarifying and removing or adding rock as required, after which the entire area shall be recompacted as specified hereinbefore. In the testing of the surface, the measurements will not be taken in small holes caused by individual pieces of rock having been pulled out by the grader.

B. Thickness Requirements:

- 1. Measurements Thickness of base shall be measured at intervals of not more than 200 feet. Measurements shall be taken at various points on the cross section, through holes not less than three inches in diameter.
- 2. Areas Requiring Correction Where the compacted base is deficient by more than ½ inch from the thickness called for in the plans, the Contractor shall correct such areas by scarifying and adding rock. The base shall be scarified and rock added for a distance of 100 feet in each direction from the edge of the deficient area. The affected areas shall then be brought to the required state of compaction and to the required thickness and cross section.
- 3. Deficient Areas Left in Place As an exception to the requirement for correcting areas of base which show a thickness deficiency exceeding the allowable ½ inch, the deficiency might be considered as not sufficient to seriously impair the required strength of the base and may be left in place. No payment, however, will be made for such deficient areas left in place and not corrected.

3.08 MAINTENANCE

The Contractor will be responsible for assuring that the true crown and template are maintained, with no rutting or other distortion, and that the base meets all the requirements, at the time the surface course is applied.

3.09 PROTECTING ADJACENT WORK

Provide adequate protection for all adjacent construction, whatever it may be, against bituminous spraying. Spraying of bituminous material on work, other than base course, will not be accepted.

3.10 TRANSPORTATION OF THE ASPHALT

The surface course shall be transported in tight vehicles previously cleaned of all foreign material. The inside surface of the truck bodies shall be only thinly coated with soapy water or an approved emulsion containing not over 5 percent oil. Kerosene, gasoline or similar products shall not be used. After coating and before loading, the truck bodies shall be raised and drained of all excess liquids.

3.11 <u>INSTALLATION OF FI</u>NAL ASPHALTIC CONCRETE SURFACE COURSE

ASPHALTIC CONCRETE PAVING 02513-7

The Contractor shall install asphaltic concrete surface course over the entire surface as per the plans.

Mechanical spreading and screeding equipment shall be of an approved type that is self-propelled and can be steered. It shall be equipped with a receiving and disbursing hopper and a mechanical screed or strike-off member capable of adjustment to regulate the depth of material being spread. Tandem Type 5 to 12 ton steel- wheeled rollers shall be used for sealing. Self-propelled, pneumatic-tired traffic rollers equipped with at least 7b smooth tread, low pressure tires, having a total weight of 6 to 10 tons shall be used for final rolling.

3.12 FIELD QUALITY CONTROL

The final surface course of all pavements will be required to be checked by a rolling straightedge. The finished surface shall not vary more than 3/16 inch from the straightedge applied parallel to the centerline of the pavement. The straightedge shall have an effective length of 15 feet.

END OF SECTION

SECTION 02515 PORTLAND CEMENT CONCRETE PAVING

PART 1 - GENERAL

1.01 <u>RELATED DOCUMENTS</u>

A. All applicable provisions of the Bidding and Contract Requirements, and Division 1 - General Requirements shall govern the work under this Section.

1.02 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the Portland Cement Concrete Paving work, as indicated on the drawings, as specified herein or both.
- B. Including, but not necessarily limited to the following:
 - 1. Fill, sub-grade, and limerock base.
 - 2. Concrete form work.
 - 3. Concrete reinforcement.
 - 4. Expansion and contraction joints.
 - 5. Concrete paving.

1.03 RELATED WORK

- A. Section 02200 Earthwork
- B. Section 02513 Asphaltic Concrete Paving General

1.04 **QUALITY ASSURANCE**

- A. Requirements of Regulatory Agencies: Perform work in accordance with local building and other applicable codes.
- B. Installation: Performed only by skilled workmen with satisfactory record of performance on completed projects of comparable size and quality.
- C. Inspection and Testing: Performed in accordance with Section 01410, Testing Laboratory Services, unless otherwise specified.
 - 1. Test cylinders as per ASTM C-39.

PORTLAND CEMENT CONCRETE PAVING

- a. Minimum of three (3) concrete test cylinders shall be taken for every 75 or less cubic yards of concrete placed.
- b. Minimum of one (1) additional test cylinder shall be taken during any cold weather concreting, and be cured on job site under same conditions as the concrete it represents.
- 2. Slump test as per ASTM C-143:
 - a. Minimum of one (1) slump test shall be taken for each set of test cylinders taken.

1.05 SUBMITTALS

- A. Test Reports: Reports of concrete compression, yield, air content, and slump tests.
- B. Certificates:
 - 1. Manufacturer's certification that materials meet specification requirements.
 - 2. Material content per cubic yard of each class of concrete furnished.
 - a. Dry weights of cement.
 - b. Saturated surface-dried weights of fine and coarse aggregate.
 - c. Quantities, type and name of admixtures.
 - d. Weight of water.
 - 3. Ready-mix delivery tickets, ASTM C-94.

C. Shop Drawings:

- 1. Show sizes and dimensions for fabrication and placing of reinforcing steel and bar supports.
- 2. Indicate bar schedules, stirrup spacing, and diagrams of bend bars.
- 3. Detail items of form systems affecting appearance of Architectural concrete surfaces such as joints, tie holes liners, patterns and textures. Show items in relation to entire form system.

1.06 DELIVERY, STORAGE AND HANDLING

PORTLAND CEMENT CONCRETE PAVING 02515-2

- A. Deliver reinforcement to project site in bundles marked with metal tags indicating bar size and length.
- B. Handle and store materials to prevent contamination.

1.07 JOB CONDITIONS

- A. Allowable concrete temperatures:
 - 1. Hot weather: Maximum 90° F as per ASTM C-94.
- B. Do not place concrete during rain, unless protection is provided.

PART 2 - PRODUCTS

- 2.01 <u>FILL</u>
 - A. As specified in Section 02513 Asphaltic Concrete Paving.
- 2.02 SUBGRADE
 - A. As specified in Section 02513 Asphaltic Concrete Paving
- 2.03 LIMEROCK BASE
 - A. As specified in Section 02513 Asphaltic Concrete Paving.
- 2.04 READY-MIXED CONCRETE
 - A. Cement: ASTM C-150, normal Type 1.
 - B. Admixtures:
 - 1. Air entraining: ASTM C-260.
 - 2. Chemical: Type (as required) ASTM C-494.
 - 3. Fly ash and pozzolans: ASTM C-618.
 - C. Coarse Aggregate: Not less than 50% clean, hard, crushed stone conforming to requirements of Table 2, size number 467 ASTM C-33.
 - D. Slump Range: 2-4 inches tested according to ASTM designation C143 (AASHTO T119).

PORTLAND CEMENT CONCRETE PAVING

- E. Air content: 5% + 1%.
- F. Mix Proportioning:
 - 1. 28-day compressive strength of cured laboratory samples 3,000 psi.
 - 2. Minimum cement content 5 sacks/cubic yard.
- G. Curing Material: Liquid membrane, ASTM C-309, Type 1.
- H. Mixes:
 - 1. ASTM C-94.
 - 2. Mix concrete only in quantities for immediate use.
 - 3. Do not retemper or use set concrete.

2.05 REINFORCEMENT

- A. Reinforcing Steel Bars: 60 psi yield strength; deformed billet steel bars; ASTM A-615, plain finish.
- B. Welded Steel Wire Fabric: Plain type, ASTM A-185, hot dip galvanized, plain finish.
- C. Tie Wire: FS QQ-W-461-G, annealed steel, black, 16 ga. minimum.
- D. Bar Supports: Conform to "Bar Support Specifications," CRSI Manual of Standard Practice.

2.06 FORMWORK AND ACCESSORIES

- A. Formwork: Matched, tight fitting and adequately stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of concrete, conform with ACU 347, Chapter 3, Material and Form Work.
- B. Lumber:
 - 1. Softwood framing lumber: Kiln dried, PS-20.
 - 2. Boards less than 1-1/2 inch thick and 2 inches wide, used for basic forms and form liners: Kiln dried.

- 3. Grade marked by grading rules agency approved by American Lumber Standards Committee.
- 4. Light framing or studs for board or plywood forms, 2 inches to 4 inches width and thickness, construction standard grade.
- 5. Boards for basic forms, construction standard grade.
- 6. Board surface: Smooth.

C. Plywood:

- 1. Exterior type softwood plywood, PS 1-66.
- 2. Each panel stamped or branded indicating veneer grades, species, type and identification.
- 3. Wood faced plywood for Architectural concrete surfaces.
 - a. Panel veneer grades: B-C.
 - b. Mill-oiled sides and mill-sealed edges of panels.

D. Ties:

- 1. Material: Steel
- 2. Type: Snap ties
- 3. Depth of breakback: 1 in.
- 4. Maximum diameter, 1/4 in.

E. Form Coatings:

- 1. Non-staining type.
- 2. Agent: Pine oil derivative.

2.07 EXPANSION AND CONTRACTION JOINTS

A. Minimum 3/4 inch thick asphaltic impregnated fiberboard as per ASTM D-1751.

2.08 OTHER

A. Water: Clean and potable.

PART 3 - EXECUTION

3.01 **BARRICADES**

- Provide substantial temporary barricades around all areas of operation and Α. maintain until work under this Section is completed and approved.
- B. Install temporary traffic, markers, signals, and signs as per D.O.T. Standard Specifications to:
 - 1. Eliminate potentially hazardous conditions.
 - 2. Maintain adequate traffic patterns free of conflict with work under this Contract.

3.02 PREPARATION OF SUBGRADE

- A. Ensure rough grading has brought subgrade to required elevations.
- B. Fill soft spots and hollows with additional fill, without organics.
- C. Level and compact subgrade, to receive limerock base for concrete walks, curbs and gutters, to 98% compaction as per AASHTO T-180.

3.03 **FORMWORK**

- A. CONTRACTOR is responsible for the design, construction, removal and complete safety of formwork and shoring.
- B. Form construction shall be provided to shape, lines dimensions of members shown: substantial, tight enough to prevent leakage, and properly braced or tied to maintain position and size, form sides and bottoms of members unless specifically excepted.
- C. Fill voids of plywood joints with sealant and tool smooth.
- D. Form vertical surfaces to full depth and securely position to required lines and levels. Ensure form ties are not placed so as to pass through concrete.
- E. Arrange and assemble formwork to permit easy dismantling and stripping, and to prevent damage to concrete during formwork removal.

3.04 REINFORCING

PORTLAND CEMENT CONCRETE PAVING

- A. Reinforce concrete curbs and gutters. Allow for minimum 1-1/2 inch concrete cover.
- B. Do not extend reinforcing through expansion and contraction of joints. Provide doweled joints through expansion and contraction joints, with one end of dowels fitted with capping sleeve to allow free movement.

3.05 FORMING EXPANSION AND CONTRACTION JOINTS

- A. Place expansion and contraction joints at 20 foot intervals or as indicated on drawings. Where possible, make joints of curbs coincide with joints in paving slabs. When sidewalks abut building, provide continuous joint filled.
- B. Fill joints with filler of required profiles, set perpendicular to longitudinal axis of walks, curbs and gutters. Recess 1/2 inch below finished concrete surface.

3.06 INSPECTION

- A. Assure that excavation and form work are completed, and excess water is removed.
- B. Check that reinforcement is secured in place.
- C. Verify that expansion joint material, anchors, and other embedded items are secured in position.

3.07 PREPARATION FOR PLACEMENT

- A. Notify the ENGINEER and other inspectors at least 96 hours prior to inspection.
- B. Equipment forms, and reinforcing shall be clean and wet down, reinforcing firmly secured in place, runways set up and not resting on or displacing reinforcing.

3.08 PLACING CONCRETE

- A. Place concrete, screed and wood float surfaces to a smooth and uniform finish, free of open texturing and exposed aggregate.
- B. Avoid working mortar to surface.
- C. Round all edges, including edges of expansion and contraction joints, with 1/2 inch of radius edging tool.
- D. Where concrete curbs are adjacent to pavement slabs, make concrete curbs and gutters integral with slabs. Make expansion and contraction joints of curbs coincide with slab joints.

PORTLAND CEMENT CONCRETE PAVING

- E. Ensure finished surfaces do not vary from true lines, levels or grade by more than 1/8 inch in 10 feet when measured with straightedge.
- F. Apply curing compound on finished surfaces immediately after finishing. Apply in accordance with manufacturer's recommendations.

3.09 PROTECTION OF COMPLETED WORK

A. During curing period, protect concrete from damaging mechanical disturbances, water flow, loading, shock, and vibration.

3.10 CLEAN UP

- A. Remove all debris and excess material immediately from project site.
- B. Take down all barricades and temporary traffic markers, signals and signs only after all work included in this section is finished and inspected, and only after so directed by OWNER's Representative.
- C. Leave project area neat, orderly and free of any hazardous conditions.

END OF SECTION

SECTION 02520 CONCRETE CURBS AND HEADERS

PART 1 - GENERAL

1.01 <u>SCOPE</u>

The work covered by this section of the specifications consists of furnishing all plant, labor, equipment, appliances and materials and performing all operations in connection with the construction of concrete curbs and headers, complete and in place, in strict accordance with these specifications and the applicable drawings and subject to the terms and conditions of this contract.

1.02 REFERENCES

Florida Department of Transportation Standard Specifications for Road and Bridge Construction, (latest edition)

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The concrete mix shall produce standard weight concrete with the following properties to be verified by the use of the appropriate listed test methods.
 - Compressive strength: 3,000 psi at 28 days tested according to ASTM designation C31 (AASHTO T23)
 - Slump Range: 2-4 inches tested according to ASTM designation C143 (AASHTO T119)
- B. Joint materials shall be in accordance with FDOT Specification Section 932

PART 3 - EXECUTION

3.01 CONSTRUCTION METHODS

Concrete curbs and headers shall be constructed of the type and in the locations as shown on the plans.

A. FORMS: Forms for this work shall be made of either wood or metal. They shall be straight, free from warp or bends, and of sufficient strength, when staked, to resist the pressure of the concrete without springing. If made of wood, they shall be of

CONCRETE CURBS AND HEADERS

two (2) inch surfaced plank; if made of metal, they shall be of approved section and shall have a flat surface on top.

B. CONSTRUCTION: Excavation shall be made to the required depth; and the sub-grade or base upon which the curb or header is placed shall be compacted to 98% AASHTO T-180.

The concrete shall be placed in the forms to the depth specified, and tamped and spaded to prevent honeycomb and until the top of the structure can be floated smooth and the edges rounded to the radius shown on the plans.

Contraction joints shall be placed at intervals of ten feet except where a lesser interval is required for closure, but no section shall be less than four feet in length.

Contraction joints shall be created while the concrete is still plastic by using a grooving tool or by inserting a premolded filler strip, or a groove may be saw cut into the concrete soon after it has hardened. Curb with irregular cracks due to late contraction joint construction will not be accepted.

Expansion joints shall be constructed at all radius points and at other locations indicated on the plans. They shall be located at intervals of 500 feet between other expansion joints, or ends of a run. The joint shall be 1/2 inch in width.

The forms shall be removed within twenty-four (24) hours after the concrete has been placed, and minor defects then filled with mortar composed of one (1) part Portland Cement and two (2) parts fine aggregate. Plastering shall not be permitted on the face of the curb; and all rejected curb, or header shall be removed and replaced without additional compensation. The curb top, face and/or header top shall be given a surface finish while the concrete is still green. A brush finish will be required unless noted otherwise; however, additional finishing may be required in areas considered too rough or with minor defects.

After the concrete has been rubbed smooth, it shall be rubbed again until a uniform color is produced, using a thin grout composed of one (1) part Portland Cement and one (1) part fine aggregate.

After concrete has set sufficiently, the spaces in front and back of the curb shall be refilled to the required elevation with suitable material, which shall be placed and thoroughly compacted in layers of not more than six (6) inches in thickness.

END OF SECTION

SECTION 02580 PAVEMENT MARKING AND POST SIGNS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 <u>SUMMARY</u>

- A. This Section includes the following:
 - 1. Pavement marking.
 - 2. Protection of painted markings.
 - 3. Aluminum or steel sign panels and posts.
 - 4. Exterior signage indicated on the drawings and specified in this section.

B. Related Sections:

- 1. Asphaltic Concrete Pavement Section 02513.
- Cast-In Place Concrete Section 03300.

1.03 SUBMITTALS

- A. Submit properly identified manufactures product data and technical data prior to starting work for review and acceptance of all components to be used.
- B. Submit shop drawings for review, indicating construction details, sizes, elevations, installation requirements, gages, thickness of materials, color and other information necessary to show compliance with the requirements of this section.
- C. Submit paint tests, as specified in Section 971 of FDOT Specifications and as applicable to hereinafter specified material.

1.04 QUALITY ASSURANCE

- A. All signage must comply with the latest edition of the Florida Building Code and all referenced standards included therein as well as all other applicable code ordinances.
- B. Work shall be performed in accordance with the Contract Documents in a neat and accurate manner.

PAVEMENT MARKING AND POST SIGNS

- C. All equipment shall be of type and design that will readily obtain the required uniformity of application of the pavement markings both as to thickness of coating and as to alignment.
- D. Applicable Publications: The following publications of the issue listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:
 - 1. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction. (Latest Edition)
 - 2. Manual on Uniform Traffic Control Devices for Streets and Highways published by the U.S. Department of Transportation, Federal Highway Administration, (Latest Edition)
 - 3. Broward County Administrative Code "Minimum Standards". (Latest Edition)

1.05 REFERENCES

- A. Applicable Publications: The following publications of issues listed below referred to elsewhere by basic designation only, form a part of this specification to the extent indicated by references thereto:
 - 1. Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration, (Latest Edition)
 - 2. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction, (Latest Edition)
 - 3. Broward County Administrative Code "Minimum Standards". (Latest Edition)
- B. When reference is made herein to the FDOT Specifications delete therefrom the basis of payment and other pay measurement requirements. Payment for the work specified in this section will be included as part of the lump sum bid for the entire project in accordance with the contract documents. When the word "ENGINEER" occurs therein, substitute the words "Architect-Engineer".

PART 2 - PRODUCTS

2.01 <u>MATERIALS</u>

- A. Paint: In accord with requirements as specified in Section 971 of the FDOT Specifications.
 - 1. Paint shall be factory mixed, quick drying and non-bleeding type.
 - 2. Color shall be as per D.O.T. requirements.
 - 3. Striping, arrows, lane markers and stop bars shall be provided with paint containing reflective additive.

PAVEMENT MARKING AND POST SIGNS

- B. Thermoplastic paint: In accord with the applicable Technical Specifications (Section 711) of the Florida Department of Transportation and Broward County Standards.
- C. Reflectors: In accord with Broward County Minimum Standards.
- D. Sign Panels:
 - Aluminum or galvanized steel in accordance with the applicable requirements of Section 700 "Highway Signing" of the FDOT Standard Specifications or Broward County Administrative Code "Minimum Standards"
 - 2. Size, shape and color as indicated on the drawings or as directed by Architect-Engineer
- E. Sign Support Posts (Unless noted otherwise on Drawings):
 - 1. Aluminum or Galvanized Steel in accordance with the applicable requirements of Section 700 "Highway Signing" of the FDOT Specifications or Standard Road Details and Specifications (DCPWD).
 - 2. Size, shape and color of posts and mountings as indicated on drawings or as directed by Architect-Engineer.

PART 3 - EXECUTION

3.01 INSPECTION

Do not proceed with the work in this section until conditions detrimental to the proper and timely completion of the work have been corrected in an acceptable manner.

3.02 SIGN PANELS AND SUPPORT INSTALLATION

- A. Secure breakaway sign post assembly to concrete substrate and sign panel to aluminum posts according to FDOT and Broward County recommendations
 - 1. Section 700 "Highway Signing" of FDOT Specifications
 - 2. Manual on Uniform Traffic Control Devices
 - 3. Broward County Administrative Code "Minimum Standards"
- B. Approved shop drawings and as indicated on drawings

3.03 PAVEMENT MARKINGS

- A. Sweep dust and loose material from the sealed surface.
- B. Apply paint striping as indicated on the drawings, with suitable mechanical equipment to produce uniform straight edges.
 - 1. Apply in not less than (2) two coats as per manufacturer's recommended rates of applications.

PAVEMENT MARKING AND POST SIGNS

- C. Protect pavement markings until completely dry in accordance with manufacturer's recommendations.
- D. Time of Application: Painting shall be done only during daylight hours and, as far as practical, shall be terminated in time to permit sufficient drying by sunset.
- E. Weather Limitations: No paint shall be applied when any moisture is present on the surface to be painted or when the air temperature is below 40 degrees F. Painting shall not be done when winds are sufficient to cause spray dust.
- F. Preparation of Surface to be painted: The surface which is to be painted shall be cleaned, by compressed air or other effective means, immediately before the start of painting and shall be clean and dry when the paint is applied. Any vegetation or loose soil shall be removed from the pavement before striping is begun.
- G. Mixing Paint: The paint shall be thoroughly mixed before it is poured into the painting machine and no thinning of the paint in the machine will be allowed at any time. Before the start of each day's work the paint container, the connections and the spray nozzles on the machine shall be thoroughly cleaned with paint thinner or other suitable cleaner.
- H. Paint Application: The traffic markings shall be of the specified dimensions with clean, true edges and without sharp breaks in the alignment. A uniform coating of paint shall be obtained and the finished markings shall contain no light spots or paint skips. Any stripes that do not have a uniform, satisfactory appearance, both day and night, shall be corrected.
- I. Rate of Paint Application: The minimum rate of application for paint shall be as follows:
 - 1. Six inch solid parking stalls stripes: 18.5 gallons per mile.
 - 2. Any other width stripe or marking: A direct proportion of the above.
- J. Required Film Thickness: The minimum wet film thickness for all painted areas shall be 15 mils.
- K. Alignment of Stripes: Where a stripe deviates from the correct alignment, as indicated by the string line, by more than one inch in any 20 foot length, it shall be obliterated and the stripe corrected hereinafter as specified in paragraph "Corrective Measures".

3.04 PROTECTION OF PAINTED MARKINGS

PAVEMENT MARKING AND POST SIGNS

- A. Protection of Stripes: All newly painted stripes, or other markings, shall be protected until the paint is sufficiently dry to permit vehicles to cross the marking without damage from the tires.
- B. Repair of Damaged Areas: Any portions of the stripes damaged by passing traffic or from any other cause shall be repainted at the Contractor's expense.

3.05 DIMENSION AND ALIGNMENT TOLERANCE

- A. Dimensions: No marking shall be less than the specified width. No markings shall exceed the specified width by more than 1/2 inch. Alignment tolerances shall be as specified herein.
- B. Correction Rates: Any corrections of variation in the width of the alignment of stripes shall not be made abruptly but the stripes shall be returned to the design width at the rate of at least 10 feet for each 1/2 inch of correction.

3.06 <u>CORRECTIVE MEASURES</u>:

- A. All painted markings which fail to meet the specifications, including the permissible tolerances and the appearance requirements, or are marred or damaged shall be corrected at the Contractor's expense.
 - 1. All drip and spattered paint shall be removed. When it is necessary to remove paint, it shall be done by means that will not damage the underlying surface of the pavement. When necessary to correct a deviation that exceeds the permissible tolerance in alignment, that portion of the stripe affected shall be removed and repainted in accordance with these specifications.
- B. Corrective Devices: Misalignment, defective surfaces, etc., shall be corrected by chemical agents, or by any other type of mechanical device which will effectively remove the paint without damage to the pavement surface, or prevent the reapplication of markings.

3.07 <u>SPARE PAINT</u>

A. Provide the Owner with a minimum of 5 gallons of Traffic Paint from the same batch used in application of pavement markings. Also provide paint specifications and the manufacturer's identification number of the paint used.

END OF SECTION

PAVEMENT MARKING AND POST SIGNS

SECTION 02720 STORM DRAINAGE SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

The extent of the storm drainage system is shown on the drawings and/or specified.

1.02 <u>RELATED WORK</u>

- A. Section 02110: Clearing and Grubbing
- B. Section 02220: Trenching, Backfilling and Compacting

1.03 SUBMITTALS

A. Submit shop drawings for pipe, inlets, manholes, frames and covers.

PART 2 - PRODUCTS

2.01 HIGH DENSITY POLYETHYLENE PIPE

A. High Density Polyethylene Pipe (HDPE) sizes twelve (12) – thirty-six (36) inches, shall be corrugated type, smooth interior, conforming to ASTM F405, ASTM F667, AASHTO M252 and AASHTO M294 as manufactured by Advanced Drainage Systems or approved equal.

B. Basic Material:

- 1. Extruded Pipe and Blow Molded Fittings: Pipe and fittings shall be made of virgin PE compounds which conform with the requirements for Type III, Category 4 or 5, Grade P33, Class C; or Grade P34, Class C, as defined and described in ASTM D 1248.
- 2. Rotational Molded Pipe and Fittings: Pipe and fittings shall be made of virgin PE compounds which conform with the requirements of Type III, Category 3, Grade P33, Class C; or Grade P34, Class C, as defined and described in ASTM D 1248.
- C. Corrugated Polyethylene Pipe shall meet the requirements as describe in ASTM D 2412 for pipe stiffness.
- D. Corrugated Polyethylene Pipe shall be in accordance for brittleness with ASTM D 2444.

STORM DRAINAGE SYSTEM

E. Fitting Requirements:

- 1. The fittings shall not reduce or impair the overall integrity or function of the pipe line.
- 2. Couplings shall be corrugated to match the pipe corrugations and shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints. Couplings shall be bell and spigot, split collar, or screw-on collar. Split collar couplings shall engage at least one full corrugation on each pipe section and screw on collars shall be in width at least one-half the nominal diameter of the pipe.
- 3. HDPE pipe joints shall be of a rubber or neoprene gasket designed to secure a soil tight joint.

PART 3 - EXECUTION

3.01 <u>INSTALLATION</u>

- A. Piping and appurtenances for sewers shall be of the type and material specified in the applicable sections of the Detailed Specifications. All pipes, fittings, jointing materials, grates, manhole frames and covers, and other appurtenances shall be new material to be included in the work; and if not specifically described in these specifications, shall be of the best quality and entirely suitable for the service intended. All such material shall be approved by the engineer prior to installation.
- B. Pipe shall be protected during storage and handling against impact shocks, or free fall. Pipe shall be kept clean at all times and no pipe shall be used that does not conform fully to standards or specifications hereinafter described.
- C. Each pipe section shall be laid in strict conformance with the line and grade as shown on the construction plans. Three (3) batter boards and a top line shall be used when pipe is laid, unless another method of checking the inner grade is approved by the engineer. The laying of pipe in finished trenches shall commence at the lowest point with the bell end laid upgrade.
- D. The contractor shall provide and maintain on the job site at all times, a gauge rod of sufficient length to reach from the invert of the pipe being laid to the top line secured on the batter boards. The gauge rod shall be graduated and numbered each foot of its entire length and shall be equipped with either a plumb line or two (2) spirit levels.
- E. Construction using any of the several type laser beam devices is generally acceptable provided same is in good repair and calibration and a level and level rod

STORM DRAINAGE SYSTEM

SISTRUNK PARKING LOT

PROJECT # 12166

is used to check for grade at catch basins, manholes and outfalls. Use of levels and/or transits alone is discouraged and generally will not be permitted.

- F. Prior to installing the pipe, the rubber gasket shall be placed on the tongue of the pipe, in accordance with the manufacturer's recommendations, but not more than twenty-four (24) hours prior to installation of the pipe. The tongue end shall be protected at all times from the sun, blowing dust, or other deleterious agents. Gaskets shall be inspected before installation of the pipe and any loose or improperly affixed gaskets shall be removed and replaced to the satisfaction of the engineer.
- G. Pipe shall be set firmly according to the lines and grade; and preparatory to making joints for concrete pipe, all surfaces of the portion of the pipe to be jointed shall be thoroughly cleaned. The pipe shall be laid with the groove upstream. A shallow excavation shall be made underneath the pipe at the joint.
- H. Immediately prior to installation, the entire interior of the groove of the pipe already installed, and the rubber gasket of the pipe to be installed shall be coated with an approved vegetable soap lubricant. The groove and spigot ends shall be cleaned prior to application of the lubricant. The pipe shall then be aligned with the previously installed pipe and the joint pulled together. The joint shall be pulled by the use of interior or exterior pull jacks or winches, anchored by suitable means. The choice of method and type of equipment will depend on trench conditions, type and size of pipe, and its ability to properly seat the gasket. If, while making the joint, the gasket becomes loose and can be seen through the exterior joint recess, when the joint is pulled up to within one (1) inch of closure, the pipe shall be removed and the joint remade to the satisfaction of the engineer.

3.02 <u>EARTHWORK</u>

Excavation of trenches, preparation of trench bottoms, backfilling and other earthwork in connection with installation of storm sewers shall be in accordance with the section: 02220 Trenching, Backfilling and Compacting for piping systems.

3.03 RESPONSIBILITY

The contractor shall be held strictly responsible for all parts of the work that bear the load of the backfill. If structural failures in the sewers or appurtenances develop within one (1) year from the date of final acceptance of the work, the contractor shall be required to replace all faulty material at his full expense. To this end, the contractor is advised to purchase material under a guarantee from the manufacturer, guaranteeing proper service under conditions which are established by the drawings, specifications and local conditions.

SECTION 02730 EXFILTRATION TRENCH

PART 1 – GENERAL

1.01 <u>DESCRIPTION OF WORK</u>

Construct exfiltration trenches, utilizing one of the authorized types of pipe, with coarse aggregate, or ballast rock when specified, and filter fabric.

PART 2 - PRODUCTS

2.01 PIPE

- A. Pipes furnished shall be:
 - 1. Polyvinyl Chloride (PVC) Pipe

2.02 <u>COARSE AGGREGATE</u>

A. No. 4 stone.

2.03 <u>SELECT FILL</u>

A. Use select fill meeting the requirements shown in the Plans.

PART 3 – EXECUTION

3.01 EXCAVATING TRENCH

A. Carefully excavate the trench to such depths as required to permit the filter fabric, coarse aggregate and the pipe to be placed in accordance with the details shown in the Plans.

3.02 <u>LAYING PIPE</u>

EXFILTRATION TRENCH 02730-1

A. Lay all pipe conforming with the lines and grades specified in the Plans and in accordance with these Specifications. Unless otherwise specified in the Plans, set the pipe with a 36 inch minimum cover and a maximum cover of 66 inches.

3.03 PLACING COARSE AGGREGATE AND BACKFILLING

A. After placing the pipe and without disturbing the pipe, carefully place the coarse aggregate around the pipe to a depth shown in the Plans. Fold the filter fabric over the coarse aggregate. Backfill and compact as described below.

3.04 <u>EXFILTRATION TRENCH UNDER PAVEMENT</u>

A. Fill the area above the coarse aggregate with select fill material. Place and compact the select fill according to the requirements for pipe. Additional coarse aggregate is allowed over the top of the pipe instead of select fill material. In this case, the filter fabric shall be extended to wrap the additional course aggregate. The top of the coarse aggregate shall not be higher than the bottom of the base, unless shown in the Plans. No additional costs associated with substituting coarse aggregate for select fill will be paid.

3.05 EXILFTRATION TRENCH NOT UNDER PAVEMENT:

A. Fill and compact the area above the coarse aggregate according to the requirements for pipe, unless specific procedures are described in the Plans.

3.06 <u>METHOD OF MEASUREMENT.</u>

A. The quantity of exfiltration trenches to be paid for under this Section will be the length in feet, measured in place, completed and accepted as specified on Standard Plans.

3.06 BASIS OF PAYMENT

A. The quantities determined as provided above will be paid for at the Contract unit price per foot for exfiltration trenches. Such prices and payments will be full compensation for all the work specified in this Section and will include all materials and all excavation, and will also include sheeting or shoring, if required, the disposal of surplus material, pavement restoration, backfilling and tamping, but will not include payment for items paid for elsewhere in the specifications.

END OF SECTION

EXFILTRATION TRENCH 02730-2

SECTION 02760

TRAFFIC STRIPING PAINT

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 traffic coatings for the following applications:
 - 1. Pavement Markings: Stall striping and cross-hatching
 - 2. Concrete Curbs
- B. Related Sections include the following:
 - 1. Division 03 Section "Cast-in-Place Concrete" for concrete substrates.

1.3 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Traffic Striping Layout: According to the contract drawings and existing conditions.
- C. Warranty: Include sample warranty, as applicable.

1.4 QUALITY ASSURANCE

- A. Contractor's Quality Control Responsibilities: Contractor is solely responsible for quality control of the Work.
- B. Installer (Applicator) Qualifications: An experienced applicator, approved by the paint manufacturer, who is specialized in installing work similar in material, design, and extent to that indicated for this Project.
- C. Source Limitations: Obtain traffic striping paint from a single manufacturer.
- D. Warranty: Provide material with a minimum of one (1) year manufacturer warranty.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "General Requirements."

- Before installing traffic coatings, meet with representatives of authorities having jurisdiction, manufacturer's technical representative, Owner, Architect, consultants, independent testing agency, and other concerned entities. Review requirements for traffic coatings. Notify participants at least seven days before conference.
- F. Regulatory Requirements: Comply with applicable requirements of the laws, codes, ordinances and regulations of Federal, State and Municipal authorities having jurisdiction. Obtain necessary approvals from all such authorities.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels showing the following information:
 - 1. Manufacturer's brand name.
 - 2. Type of material.
 - 3. Directions for storage.
 - 4. Date of manufacture and shelf life.
 - 5. Lot or batch number.
 - 6. Mixing and application instructions.
 - 7. Color.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue. Protect from freezing. Keep storage area neat and orderly.

1.6 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.
- B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.
- C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1.7 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
 - 1. Quantity: 3 percent, but not less than 1 gal. or 1 case, as appropriate, of each material and color applied.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. VOC Content: Provide waterproofing and traffic paint materials that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - Pavement-Marking Paint: 150 g/L.

2.2 PAVEMENT MARKINGS

- A. Pavement-Marking Paint: Waterborne acrylic, ready mixed, complying with FS TT-P-1952B, with drying time of less than 45 minutes.
 - 1. Available Products:
 - a. ICI Devoe Paint Centers; Acrylic Traffic Paint DV850XX.
 - b. Sherwin-Williams Co.; Setfast Acrylic Waterborne Traffic Paint TM226/TM227.
- B. Pavement-Marking Paint: Latex, waterborne emulsion, lead and chromate free, ready mixed, complying with FS TT-P-1952, with drying time of less than 45 minutes.
 - 1. Available Products:
 - Benjamin Moore & Co.; Safety & Zone Marking Latex M58.
 - PPG Industries, Inc. (Pittsburgh Paints); Speedhide Traffic and Zone Marking Latex 11-23.
 - Sherwin Williams; Set Fast Acrylic Latex Traffic Marking Paint (G2 New Green 6 for Electric Vehicle Charging Stations)
- C. Color: Coordinate color of all standard striping, curbs, and cross-hatch with construction plans.
- D. Glass Beads: Beads (Glass Spheres) shall be used in all pavement markings except stall striping lines and shall conform to FS TT-B-1325, Type I or AASHTO M247, Type I. Glass beads used in all pavement marking shall be a minimum of 80% true spheres when tested according to ASTM-D-1155.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Examine the areas to receive the Work and the conditions under which the Work would be performed. Remedy conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Comply with procedures specified in PDCA P4 for inspection and acceptance of surfaces to be painted.

3.2 PREPARATION

- A. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
 - Cementitious Materials: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.

B. Material Preparation:

- 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
- 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.

3.3 APPLICATION

- A. Do not apply traffic paint for striping and other markings until traffic coating has cured according to manufacturer's written recommendations (see Division 07 "Traffic Coatings").
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 - 1. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to Manufacturer's written instructions.
- D. Minimum Coating Thickness: Paint face of curb and top 6" of curb. Apply paint materials minimum 15 mil in two equal coats. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Glass Beads: Glass beads shall be distributed upon the marked areas immediately after application of the paint. A dispenser shall be furnished which is properly designed for attachment to the marking machine and suitable for dispensing glass beads.
 - 1. Glass beads shall be applied at the manufacturer's specified rate (but not less than 6lbs/gal of paint) and evenly distributed while the liquid marking is still fluid.
 - 2. Bead dispensers shall be calibrated at the beginning of the project to the proper flow rate and monitored throughout the course of the project to ensure proper bead coverage.
 - 3. Glass beads shall adhere to and be properly embedded in the cured paint or all marking operations shall cease until corrections are made.
 - 4. A night inspection of the markings is advisable to check for uniform reflectivity of the markings.

SISTRUNK PARKING LOT 12

PROJECT # 12166

- F. Striping, Cross-Hatching, and Concrete Curbs:
 - 1. Traffic and Zone Marking Paint: Two coats.
 - a. Finish Coat: Traffic and Zone Marking Paint.

3.4 PROTECTING AND CLEANING

- A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
- B. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Engineer.
- C. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
 - 1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

END OF SECTION 09 9150

SECTION 02810 IRRIGATION SYSTEM

PART 1 - GENERAL

1.01 <u>SCOPE</u>

- A. The work covered by this specification shall include the furnishing of all labor, materials, tools and equipment necessary to perform and complete the installation of an automatic irrigation system as specified herein and as shown on the drawings and any incidental work not shown or specified which can reasonably be determined to be part of the work and necessary to provide a complete and functional system.
- B. The work covered by this specification also includes all permits, federal, state and local taxes and all other costs, both foreseeable and unforeseeable at the time of construction.
- C. No deviation from these specifications, the accompanying drawings, or agreement is authorized or shall be made without prior written authorization signed by the Owner or his duly appointed representative.

1.02 QUALITY ASSURANCE

- A. Installer Qualifications: A firm specializing in irrigation work with not less than five (5) years of experience in installing irrigation systems similar to those required for this project.
- B. Coordination: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.
- C. Inspection of Site: The Contractor shall acquaint himself with all site conditions, including underground utilities before construction is to begin. Contractor shall coordinate placement of underground materials with contractors previously working underground in the vicinity or those scheduled to do underground work in the vicinity. Contractor is responsible for minor adjustments in the layout of the work to accommodate existing facilities.
- D. Protection of Existing Plants and Site Conditions: The Contractor shall take necessary precautions to protect site conditions to remain. Should damages be incurred, this Contractor shall repair the damage to its original condition at his own expense. Any disruption, destruction, or disturbance of any existing plant, tree, shrub, or turf, or any structure shall be completely restored to the satisfaction of the Owner and his representatives, solely at the Contractor's expense.

- E. Protection of Work and Property: The Contractor shall be liable for and shall take the following actions as required with regard to damage to any of the Owner's property.
 - a. Any existing building, equipment, piping, pipe coverings, electrical systems, sewers, sidewalks, roads, grounds, landscaping or structure of any kind (including without limitation, damage from leaks in the piping system being installed or having been installed by Contractor) damaged by the Contractor, or by his agents, employees, or subcontractors, during the course of his work, whether through negligence or otherwise, shall be replaced or repaired by Contractor at his own expense in a manner satisfactory to Owner, which repair or replacement shall be a condition precedent to Owner's obligation to make final payment under the Contract.
 - b. Contractor shall also be responsible for damage to any work covered by these specifications before final acceptance of the work. He shall securely cover all openings into the systems and cover all apparatus, equipment and appliances, both before and after being set in place to prevent obstructions on the pipes and the breakage, misuse or disfigurement of the apparatus, equipment or appliance.
 - c. All trenching or other work under the leaf canopy of any and all trees shall be done by hand or by other methods so that no branches are damaged in any way.
 - d. Buildings, walks, walls, and other property shall be protected from damage. Open ditches left exposed shall be flagged and barricaded by the Contractor by approved means. The Contractor shall restore disturbed areas to their original condition.
 - e. The Contractor shall be responsible for requesting the proper utility company to stake the exact location of any underground lines including but not limited to electric, gas, telephone service, water, and cable.
 - f. The Contractor shall take whatever precautions are necessary to protect these underground lines from damage. In the event damage does occur, all damage shall be completely repaired to its original condition, at no additional cost to the Owner.
 - g. The Contractor shall request the Owner, in writing, to locate any private utilities (i.e., electrical service to outside lighting) before proceeding with any excavation. If, after such requests and necessary staking, private utilities which were not staked are encountered and damaged by the Contractor, they shall be repaired by the Owner at no cost to the Contractor. If the Contractor damages staked or located utilities, they shall be repaired at the Contractor's expense.
- F. Codes and Inspections: The entire installation shall comply fully with all local and state laws and ordinances and with all established codes arrange for all necessary inspections and shall pay all fees and expenses in connection with same, as part of the work under

- this Contract. Upon completion of the work, he shall furnish to the "Owner" all inspection certificates customarily issued in connection with the class of work involved.
- G. The Contractor shall keep on his work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Owner, or Owner's representative.
- H. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.
- I. The Owner's Landscape Architect or designated individual shall have full authority to approve or reject work performed by the Contractor. The Owner's Authorized Representative shall also have full authority to make field changes that are deemed necessary.
- J. Final Acceptance: Final acceptance of the work may be obtained from the Owner upon the satisfactory completion of all work. Acceptance by the Landscape Architect and/or Owner in no way removes the Contractor of his responsibility to make further repairs, corrections and adjustments to eliminate any deficiencies which may later be discovered.
- K. Guarantee: All work shall be guaranteed for one year from date of final acceptance against all defects in material, equipment and workmanship to the satisfaction of the Owner. Repairs, if required, shall be done promptly at no cost to the Owner.
 - a. The guarantee shall also cover repair of damage to any part of the premises resulting from leaks or workmanship, to the satisfaction of the Owner. The Contractor shall not be responsible for work damaged by others. Repairs, if required, shall be done promptly. The guarantee shall state the name of the Owner; provide full guarantee terms, effective and termination date, name and license number of Contractor providing guarantee, address, and telephone number. It shall be signed by the chief executive of the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.
 - b. If, within ten (10) days after mailing of written notice by the Owner to the Contractor requesting repairs or replacement resulting from a breach of warranty, the Contractor shall neglect to make or undertake with due diligence to make the same, the Owner may make such repairs at the Contractor's expense; provided, however, that in the case of emergency where, in the judgment of the Owner, delay would cause serious loss or damage, repairs or replacement may be made without notice being sent to the Contractor, and Contractor shall pay the cost thereof.
- L. The Contractor shall provide full, 100% irrigation coverage in all areas designed with proposed plantings, in accordance with the site's governing permitting requirements and as designed.

- M. On-site Observation: At any time during the installation of the irrigation system by the Contractor, the Owner or Landscape Architect may visit the site to observe work underway. Upon request, the Contractor shall be required to uncover specified work as directed by the Owner or material, workmanship or method of installation not meet the standards specified herein, the Contractor shall replace the work at his own expense.
- N. Workmanship: All work shall be installed by qualified, skilled personnel, proficient in the trades required, in a neat, orderly, and responsible manner with recognized standards of workmanship. The Contractor shall have had considerable experience and demonstrated ability in the installation of sprinkler irrigation systems of this type.

1.04 SUBMITTALS

All materials shall be those specified and/or approved by the Landscape Architect.

- A. Product Data: After the award of the Contract and prior to beginning work, the Contractor shall submit for approval by the Owner and Landscape Architect, two copies of the complete list of materials, manufacturer's technical data, and installation instructions which he proposes to install.
- B. Commence no work before approval of material list and descriptive material by the Landscape Architect.
- C. Record Drawings: The Contractor shall record on reproducible, all changes that may be made during actual installation of the system. Provide controller sequencing and control valve locations.
 - a. Immediately upon installation of any piping, valves, wiring, sprinklers, etc., in locations other than shown on the original drawings or of sizes other than indicated, the Contractor shall clearly indicate such changes on a set of prints. Records shall be made on a daily basis. All records shall be neat and subject to the approval of the Owner.
 - b. The Contractor shall also indicate on the record prints the location of all wire splices, original or due to repair, that are installed underground in a location other than the controller pedestal, remote control valve box, power source or connection to a valve-in-head sprinkler.
 - c. These drawings shall also serve as work progress sheets. The Contractor shall make neat and legible notations thereon daily as the work proceeds, showing the work as actually installed. These drawings shall be available at all times for review and shall be kept in a location designated by the Owner's Representative.
 - d. Progress payment request and record drawing information must be approved by Landscape Architect before payment is made.

- e. If in the opinion of the Owner or his representative, the record drawing information is not being properly or promptly recorded, construction payment may be stopped until the proper information has been recorded and submitted.
- f. Before the date of the final site observation and approval, the Contractor shall deliver one set (copies) of reproducible record drawing plans and notes to the Landscape Architect. Record drawing information shall be approved by the Landscape Architect prior to submittal to Owner for final payments, including retentions.
- D. Operations and Maintenance Manuals: The Contractor shall prepare and deliver to the Owner, or his designated representative within ten (10) calendar days prior to completion of construction, a hard cover binder with three rings containing the following information:
 - a. Index sheet stating the Contractor's address and business telephone number, list of equipment with name (2) and address (es) of local manufacturer's representative(s).
 - b. Catalog and parts sheets on every material and equipment installed under this Contract.
 - c. Complete operating and maintenance instruction on all major equipment. Include initial controller schedule and recommended schedule after establishment period.
 - d. Demonstrate to and provide the Owner's maintenance personnel with instructions for major equipment and show evidence in writing to the Owner, or his designated representative at the conclusion of the project that this service has been rendered.

1.05 EXPLANATION OF DRAWINGS

- A. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings and sleeves which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of the work and plan his work accordingly, furnishing such offsets, fittings and sleeves as may be required to meet such conditions.
- B. The drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems, planting and architectural features. Deviations shall be brought to the Landscape Architects attention.
- C. All work called for a on the drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the specifications.

- D. The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been known in engineering. Such obstructions or differences should be brought to the attention of the Landscape Architect. In the event that notification is not performed, the Contractor shall assume full responsibility for any revision necessary.
- E. If, in the opinion of the Landscape Architect, the labor furnished by the Contractor is incompetent, unskilled, or unreliable, his equipment inadequate, improper or unsafe, or if the Contractor shall fail to continuously and diligently execute the construction, the Landscape Architect or Owner shall, in writing, instruct the Contractor to remove all such causes of noncompliance and the Contractor shall promptly comply.
- F. The Contractor shall be responsible for full and complete coverage of all irrigation areas. The Landscape Architect shall be notified of any necessary adjustments at no additional cost to the Owner. Any revisions to the irrigation system must be submitted and answered in written form, along with any change in Contract price. Layout may be modified, if necessary to obtain coverage. Spacing not to exceed 60% of the diameter.

PART 2 - PRODUCTS

2.01 MATERIALS

Material and equipment shall be supplied by the Contractor. No substitutions shall be allowed without the prior written approval of the Owner/Landscape Architect. The Contractor shall inspect all materials and equipment prior to installation, and defective materials shall be replaced with the proper materials and equipment. Those items used in the installation found to be defective, improperly installed or not as specified, shall be removed and the proper materials and equipment installed in the proper manner, as interpreted by the Owner/Landscape Architect. The Contractor shall remove all damaged and defective pipe and equipment from the site.

2.02 PIPING

- A. General Provisions: All materials throughout the system shall be new and in perfect condition unless otherwise directed by the Landscape Architect.
- B. Polyvinyl Chloride Pipe (PVC): (Where indicated on plan, use non-potable purple piping.)
 - a. Laterals: PVC shall conform to the requirements of ASTM Designation D 2241, Class 1120 or 1220. All lateral piping less than 3" in diameter shall be Class 200 SDR-21. All pipe to be purple, indicating non-potable water.
 - b. Main Line under Pressure: PVC shall conform to the requirements of ASTM Designation D 2241, Class 1120 or 1220, Schedule 40 with belled end for solvent weld connection. All pipe to be purple, indicating non-potable water.

- c. Pipe Markings: All PVC pipe shall bear the following markings:
 - o Manufacturer's Name
 - o Nominal Pipe Size
 - o Schedule or Class
 - o Pressure Rating of PSI
 - o NSF (National Sanitation Foundation) Approval
 - o Date of Extrusion

2.03 PVC JOINTS

Joints in PVC pipe smaller than 3" shall be solvent welded in accordance with the recommendations of the pipe manufacturer; the solvent cleaner and welding compound furnished with the pipe.

2.04 THREADED CONNECTIONS

- A. Threaded PVC connections shall be made up using Teflon tape only.
- B. Connection between mainline pipe fittings and automatic or manual control valves shall be made using Schedule 80 threaded fittings and nipples.

2.05 SOLVENT CEMENT

- A. General: Provide solvent cement and primer for PVC solvent weld pipe and fittings recommended by the manufacturer. Pipe joints for solvent weld pipe to be belled end. Pipe joints for gasketted pipe to be intrical ring type. Insert gaskets will not be accepted.
- B. Thrust Blocks: Main line piping 3" or greater in diameter shall have thrust blocks sized and placed in accordance with the pipe manufacturer's recommendations or, in the absence of specified recommendations by the pipe manufacturer. 3000 PSI concrete thrusts shall be properly installed at tees, elbows, 45's, crosses, reducers, plugs, caps and valves.

2.06 PIPE AND WIRE SLEEVES

- A. Sleeves to be installed:
 - a. The Contractor shall install irrigation system pipe and wire sleeves conforming to the following:
 - i. All pipe sleeves shall extend a minimum of 36" beyond the edges of pavement.

- ii. All pipe sleeves to be installed beneath future/existing road surfaces shall be PVC pipe Schedule 40 or jack and bore steel pipe as per FDOT specifications, and as shown on plans.
- iii. All irrigation system wires shall be sleeved separately from main or lateral lines.
- iv. All pipe sleeves shall be installed at the minimum depth specified for main lines, lateral lines, and electric wire.
- v. Contractor shall coordinate all pipe sleeve locations and depths prior to initiating installation of the irrigation system.

2.07 SPRINKLER HEADS

- A. Spray Sprinklers: The sprinkler shall be a fixed spray type designed for in-ground installation. The nozzle shall elevate 6" or 12" (as designated on plan) when in operation. The body of the sprinkler shall be constructed of non-corrosive heavy duty Cycolac. A filter screen shall be in the nozzle piston. All sprinkler parts shall be removable through the tip of the unit by removal of a threaded cap. Non potable cap options.
- B. Rotor Sprinklers: The sprinkler shall be as indicated on plans for in-ground installation. The nozzle shall elevate 5" (or as designated on plan) when in operation. Non-potable rubber cover option
- C. Riser mounted spray shall be as indicated on the plans. The sprinkler shall consist of a nozzle and body. The body of the riser-mount sprinkler shall be constructed of non-corrosive materials. A cone strainer shall be a separate part with the nozzle assembly to allow for easy flushing of the sprinkler. Maximum working pressure at the base of the sprinkler shall be 40 PSI.
- D. Bubblers: as indicated on plans and details. Non-potable option

2.08 AUTOMATIC CONTROL VALVE

The automatic remote control valves shall be as specified on the plans, or approved equal.

2.09 GATE VALVES

- A. Gate valves for 3/4" through 2-1/2" shall be of brass or bronze construction, solid wedge, IPS threads, non-rising stem with wheel operating handle, for a continuous working pressure of 150 PSI.
- B. Gate valves for 3" and larger: Iron body, brass or bronze mounted AWWA gate valves, with a clear waterway equal to the full nominal diameter of the valve, rubber gasket for a continuous working pressure of 150p PSI. Valve shall be equipped with a square operating nut.

2.10 VALVE BOXES

- A. For gate valves, use AMETEK #10-181-014 box with #10-181-015 locking lid, or as per the drawings.
- B. For control valves 3/4" through 2", the drip valve assemblies, use AMETEK #10-181-014 box with #10-181-015 locking lid, or sized as necessary to effectively house the equipment
- C. For control wiring splices, use AMETEK #10-181-014 box with #10-181-015 locking lid, or as per the drawings.

2.11 IRRIGATION WIRING

- A. Wiring used for connecting the electric control valves to the controllers shall be Type UF, 600 volt, single strand, solid copper with PVC insulation 4/64" thick. Size shall be 14 gauge, red for "hot" or lead wires, and common wire to be 14 gauge, white in color.
- B. Contractor shall perform an ohm test on ground to assure adequate protection against surges and indirect lightning strikes.

2.12 MISCELLANEOUS MATERIALS

- A. Drainage Backfill: Cleaned gravel or crushed stone, graded from 1" maximum to 3/4" minimum.
- B. Metalized Underground Tape: The detectable, underground utility marking tape shall consist of a minimum: 5 mil (0.005") overall thickness; five-ply composition; ultra-high molecular weight, 100% virgin polyethylene; acid, alkaline and corrosion resistant; with no less than 150 pounds of tensile break strength per 6" width; color-code impregnated with color stable, lead-free, organic pigments suitable for direct burial. Tapes utilizing reprocessed plastics or resins shall not be acceptable. The detectable, underground utility marking tape shall have a 35 gauge (0.0035") solid aluminum foil, core encapsulated within a 2.55 mil (0.00255") polyethylene backing and a 0.6 mil (0.006") PET cover coating. The laminate on each side shall consist of a 0.75 mil (0.00075") layer of hot LPDE, poly-fusing the "sandwich" without use of adhesives.

2.13 AUTOMATIC CONTROL SYSTEM

An Independent Station Controller: Furnish a solid state controller, as specified on the plans.

- A. Each station shall be capable of timing from zero (0) minute to 99 minutes per station in one (1) minute increments.
- B. Each station shall be capable of operating two (2) 7VA electric valve-in-head solenoids.
- C. The stand-alone controller shall have two (2) possible programs.

Page 327 of 409

- D. The stand-alone controller shall provide global percentage increase/decrease (water budget) for all stations simultaneously, from ten (10) to two hundred (200) percent, in ten (10) percent increments.
- E. All stations shall be able to be turned on/off manually buy operating timing mechanism or by manual switch at station output.
- F. The stand-alone controller shall incorporate an integral MOV surge protection into the terminal block for each of its 24 VAC field wire outputs. Controller power input wires will also incorporate surge protection.
- G. The control panel shall provide continuous display time. It shall have alphanumeric displays of descriptive English menus and legend identifiers with cursor selection of function and precision value adjustment by rotary dial input.
- H. The stand-alone controller shall be UL listed and FCC approved.
- I. The stand-alone controller shall have 117 VAC, 60 Hz input, 26.5 VAC, 60 Hz output for operating 24 VAC solenoids.
- J. The stand-alone controller cabinet shall be a lockable and weather-resistant outdoor cabinet. Mount as noted on plans.
- K. The controller shall be equipped with lightening protection, by the Contractor, on both the primary (120v) and each secondary (24v) circuit. The controller circuits shall be grounded to a copper clad grounding rod located at each controller.
- L. The controller shall be equipped for a water conservation device. as specified.

PART 3 - EXECUTION

3.01 INSPECTION

The Contractor shall examine the areas and conditions under which landscape irrigation system is to be installed and notify the Landscape Architect in writing of conditions detrimental to the proper and timely completion of the work. The Contractor shall proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Landscape Architect.

3.02 PREPARATION

The Contractor shall provide sleeves to accommodate piping under walks or paving. The Contractor shall coordinate with other trades and install to accurate levels prior to paving work. Cutting and patching of paving and concrete will not be permitted. The Contractor shall maintain all warning signs, shoring, barricades, flares and red lanterns, as required by any local codes, ordinances or permits.

3.03 TRENCHING AND BACKFILLING

A. Excavation: The Contractor shall stake out the location of each run of pipe, sprinkler heads, sprinkler valves and isolation valves prior to trenching. Excavation shall be open vertical construction sufficiently wide to provide free working space around the work installed and to provide ample space or backfilling and tamping. Trenches for pipe shall be cut to required grade lines, and compacted to provide accurate grade and uniform bearing for the full length of the line. The bottom of the trenches shall be free of rock or other sharp edged objects. Minimum cover shall be as follows:

Pipe and Wire Depth

Pressure Mainline 18" at top of pipe from Finish Grade

Lateral Piping (rotor) 12" at top of pipe from Finish Grade

Lateral Piping (pop-up) 12" at top of pipe from Finish Grade

Control Wiring Side of main Line

B. Minimum Clearances: All pipelines shall have a minimum clearance of six inches from each other and from lines of other crafts. Parallel lines shall not be installed directly over one another. No lateral line shall be installed in the main-line trench.

3.04 INSTALLATION OF PIPING

- A. PVC Pipe and Joints: The Contractor shall not install solvent wild pipe when air temperature is below 40ø F. Installation shall be in accordance with the manufacturer's instructions.
 - a. Only the solvent recommended by the pipe manufacturer shall be used. All PVC pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer, and it shall be the Contractor's full responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.

3.05 BACKFILLING PROCEDURES

- A. Initial backfill on PVC lines shall be pulverized native soil, free of foreign matter. Within radius of 4" of the pipe shall be clean soil or sand. Plant locations shall take precedence over sprinkler and pipe locations. The Contractor shall coordinate the location of trees and shrubs with the routing of lines and final head locations.
- B. Backfill and Compaction: The Contractor shall leave trenches slightly mounded to allow for settlement after the backfilling is completed. The Contractor shall clean the site of the work continuously of excess waste materials as the backfilling progresses, and leave in a

- neat condition. No trenches shall be left open for a period of more than 48 hours. Protect open trenches as required.
- C. The Contractor shall carefully backfill excavated materials approved for backfilling, consisting of earth, loam, sand, and other approved materials, free of rock and debris over 1" in size. Backfill shall be compacted to original density of surrounding soil without dips, sunken areas, or irregularities.
- D. The Contractor shall conform to DOT requirements for methods and required compaction percentages, for roads and paving.
- E. The Contractor shall hand place the first 6" of backfill (or to top of pipe) and have it walked on so as to secure the position of the pipe and wire.
- F. No wheel rolling will be allowed. The Contractor shall remove rock or debris extracted from backfill materials and dispose of offsite. The Contractor shall fill any voids left in backfill with approved backfill materials.
- G. Existing Lawns: Where trenching is required across existing lawns, uniformly cut strips of sod 6" wider than trench. The Contractor shall remove sod in rolls of suitable size for handling and keep moistened until replanted. The Contractor shall replant sod within 48 hours after removal, roll and water generously. The Contractor shall resod any areas not in healthy condition equal to adjoining lawns 10 days after replanting.
- H. Seeded Area: Trenching will be required across existing seeded areas, primarily roadway edging. The Contractor shall conform to the requirements of seeding, Section 02930 for the reseeding of the disturbed trench area.
- I. Pavements: Jack and bore or directional bore piping under paving materials as per local regulatory codes. No cutting and patching of pavement will be permitted.

3.06 VALVES

- A. Isolation Valves: Shall be sized corresponding to adjacent pipe size. Specified valve boxes shall be installed flush with finish grade in such a manner that surface forces applied to their exposed area will not be transmitted to the piping in which the valve is installed nor any other piping, wiring or other lines in the vicinity of said valves.
- B. Gate Valves: Install where shown, in valve boxes.
- C. Electric Control Valves: Shall be installed in specified valve boxes. The valve shall have weed control fabric and 6" of 3/4" pea gravel installed below the bottom of the valve. If the valve box does not extend to the base of the valve, a valve box extension shall be installed. Electric control valves shall be installed where shown and grouped together where practical. The Contractor shall place no closer than 24" to walk edges, bikeway edges, buildings and walls. The Contractor shall adjust the valve to provide flow rate or rated operating pressure required for each sprinkler circuit.

3.07 <u>CONDUIT AND SLEEVES</u>

- A. Conduit and Sleeves for Control Wiring and Main/Lateral Pipe: The Contractor shall provide and install where necessary. Contractor shall coordinate locations of previously installed sleeving with the General Site Contractor.
- B. The Contractor shall coordinate installation of sleeves with work of other disciplines.

3.08 CONTROLS

- A. The Contractor shall connect electric control valves to controllers in a clockwise sequence to correspond with station settings beginning with Stations 1, 2, 3, etc. Automatic controllers shall be provided and installed by the Contractor as noted on the drawings. All zones will be labeled on the controller.
- B. Controllers shall be equipped with lightning protection and grounded to a standard 5/8" copper clad steel ground rod driven a minimum of 8' into the ground and clamped.
- C. The electrical service to the controllers shall be performed by an electrical subcontractor in compliance with NEC requirements.

3.09 <u>CONTROL WIRE</u>

- A. Control wiring between the controller and electric valves shall be buried in main line trenches or in separate trenches. Electrical connection at valve will allow for pigtail so solenoid can be removed from valve with sufficient slack to allow ends to be pulled 12" above ground for examination and cleaning.
- B. An expansion loop shall be provided at every valve at 100' O.C. Expansion loop shall be formed by wrapping wire at least eight times around a 3/4" pipe and withdrawing pipe.
- C. The wire shall be bundled and taped every ten feet. The wire shall be laid in the trench prior to installing the pipe being careful to install wire beneath and 6" to the side of the main pipe line.
- D. Electrical connections to electric control valves shall be made with outdoor waterproof connectors Rainbird DB Series or King Innovation SA101 or equal.
- E. Power Connections: Electrical connections to power and signal wires shall be made using direct-bury grease tube or silicone tube type power cable splice kits.

3.10 SPRINKLER HEADS

- A. General Provisions:
 - a. Sprinkler heads shall be installed as designated on the shop drawings. Heads shall be installed on flexible PVC. Top to be flush with finish grade or top of curb.

b. Spacing of heads shall not exceed the maximum indicated on the shop drawings (unless directed by the Landscape Architect). In no case shall the spacing exceed the maximum recommended by the manufacturer.

B. Head Types:

- a. Pop-up- Rotor Sprinkler Heads: Shall be installed on flex joint and be set with top of head flush with finish grade. Heads installed at curb shall have 6" to 10" between perimeter of head and concrete. Heads placed at edge of pavement having no curb shall be installed 24" from edge of pavement.
- b. Spray Pop-up Sprinkler Heads: Shall be installed on flexible PVC and be set with top of head flush with finished grade. Sprinkler heads placed adjacent to curbs will be installed 9" from concrete. Sprinkler heads placed adjacent to pavement having no curb shall be installed 24" from the edge of pavement.

3.11 <u>COMPLETION</u>

- A. Flushing: Before sprinkler heads are set, the Contractor shall flush the lines thoroughly to make sure there is no foreign matter in the lines.
- B. The Contractor shall flush the main lines from dead end fittings for a minimum of five minutes under a full head of pressure.
- C. Testing: The Contractor shall notify Landscape Architect and Owner forty-eight (48) hours in advance of testing.
- D. Prior to backfilling of main line fittings, Contractor shall fill the main line piping with water, in the presence of the Owner/Landscape Architect, taking care to purge the air from it by operating all the sprinkler control valves one or more times and/or such other means as may be necessary. A small, high pressure pump or other means of maintaining a continuous water supply shall be connected to the main line and set so as to maintain 100 PSI in the main line system for two (2) hours without interruption. When this has been accomplished and while the pressure in the system is still 100 PSI, leakage testing shall be performed in accordance with AWWA Standard C-600. Pressure readings shall be noted and make up water usage shall be recorded. Should the rate of make-up water usage indicate significant leakage, the source of such leakage shall be found and corrected and the system then retested until the Owner/Landscape Architect is satisfied that the system is reasonably sound. Lateral line testing shall be conducted during the operating testing of the system by checking visually the ground surface until no leaks in this portion of the system are evident. Leaks shall be repaired or paid for by the Contractor at any time they appear during the warranty period.
- E. Adjustment and Coverage of System: Coordinate pressure testing with adjustments and coverage test of system so both may occur at the same time. The Contractor shall balance and adjust the various components of the system so that the overall operation of the system is most efficient. This includes a synchronization of the controllers, adjustments to pressure regulators, pressure relief valves, part circle sprinkler heads, and individual station adjustments on the controllers.

3.12 WARRANTY

- A. The Contractor shall fully warrant the landscape irrigation system for a period of one (1) year after the written final acceptance and will receive a written confirmation from the Landscape Architect that the warranty period is in effect.
- B. During the warranty period, the Contractor will enforce all manufacturer's and supplier's warranties as if made by the Contractor himself. Any malfunctions, deficiencies, breaks, damages, disrepair, or other disorder due to materials, workmanship, or installation by the Contractor and his suppliers shall be immediately and properly corrected to the proper order as directed by the Owner and/or Landscape Architect.
- C. Any damages caused by system malfunction shall be the responsibility of the Contractor who shall make full and immediate restoration for said damages.

END OF SECTION

SECTION 02920 SODDING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all labor, materials, necessary equipment and services to complete the Sodding Work as indicated on the Drawings, and as specified herein, including the replacement of any sod damaged from and adjacent to construction Work with sod of identical genus, species, and variety.
- B. Install sod in locations as indicated on the plans.

1.02 <u>RELATED WORK</u>

A. Section 02950 – Landscaping

1.03 DESCRIPTION

A. Standards

- 1. Florida Turf Producers Association, all sod shall be Florida Standard Grade.
- 2. Federal Specifications (FS) O-F-241c(1), Fertilizers, Mixed, Commercial
- 3. American Sod Producers Association (ASPA) Grade
- 4. Florida Turf Producers Association: Florida Standard Grade.
- B. Testing Agency: Independent Testing Laboratory.
- C. Requirements of Regulatory Agencies: Conform to the requirements of the Florida State Department of Agriculture.

1.04 SUBMITTAL

- A. Certificates and Guarantee
 - 1. Growers Certification, Invoice, and Guarantee
 - All sod shall be Florida Standard Grade sod as defined by the Florida Turfgrass Association which is true to botanical variety and 98% free of weeds and foreign grasses.
 - b. Florida Standard Grade may have no visible broadleaf weeds when viewed from a standing position and the turf shall be visibly consistent with no obvious patches of foreign grasses. In no case may the total amount of foreign grasses or weeds exceed 2% of the total coverage. The sod shall be neatly mowed and be mature

- enough that when grasped at one end, it can be picked up and handled without damage.
- c. Sod invoices shall display the species and variety, date harvested, and location of sod farm.
- d. One invoice per truckload is required.
- e. Compliance with state and federal quarantine restriction if applicable.
- 2. Manufacturer's certification of fertilizer and herbicide composition.
- 3. Contractor shall submit all certifications, reports, etc., to the Landscape Architect a minimum of one week prior to installation.

1.05 <u>DELIVERY, STORAGE AND HANDLING</u>

- A. Deliver sod on pallets.
- B. Protect root system from exposure to wind or sun.
- C. Protect sod against dehydration, contamination, and heating during transportation and delivery.
- D. Do not deliver more sod than can be installed within 24 hours. Landscape Architect reserves right to reject sod left in extended storage on site.
- E. Keep stored sod moist and under shade, or covered with moistened burlap.
- F. Do not pile sod more than 4 feet deep.
- G. Do not tear, stretch, or drop sod.

1.06 <u>JOB CONDITIONS</u>

- A. Begin installation of sod after preceding related Work is accepted.
- B. Environmental Requirements:
 - 1. Install sod during months acceptable to the Landscape Architect.
 - 2. Do not install sod on saturated soil.
- C. Protection: Erect signs and barriers against vehicular or pedestrian traffic.

1.07 GUARANTEE

- A. Guarantee sod for period of ninety (90) days after date of Substantial Completion.
- B. Replacement sod under this guarantee shall be guaranteed for ninety (90) days from the date of installation.

C. Repair damage to other plants during sod replacement at no cost to the City.

PART 2 - PRODUCTS

2.01 SOD

- A. Grass Species
 - 1. *Paspalum notatum'Argentine'* (Argentine Bahia grass) as shown on the Drawings.
- B. All sod shall conform to the following requirements.
 - 1. Furnish in pads that are not stretched, broken, or torn.
 - 2. Size: Sod pads shall be industry standard size, clean cut in whole squares, with a 1-1/2 inch thickness (excluding top growth and thatch).
 - 3. Sod shall be uniformly 2 inch in height.
 - 4. Thatch: Maximum 1/2 inch uncompressed.
 - 5. Inspected and found free of diseases, nematodes, pests, fire ants, and pest larvae by entomologist of Florida State Department of Agriculture.
 - 6. Weeds: Free of horse grass, nut grass or other objectionable weeds or weed seeds.
 - 7. Uniform in color, leaf texture, and density.

2.02 WATER

- A. Free of substances harmful to plant growth, objectionable odor or staining agents.
- B. The water used for establishment of plant material shall be clean and free of dirt, debris, poisons, pesticides, contaminants and any other material or compound that is detrimental or inhibits vigorous plant growth
- C. Provided by the Contractor and obtained from its source legally. Water drawn from canals and or lakes and access thereof will be done only with the express written approval of the owner of said property.

2.03 FERTILIZER

- A. Fertilizer shall be complete fertilizer, the elements of which are derived from organic sources. Fertilizer shall be a standard product complying with State and Federal fertilizer laws.
- B. Percentages of nitrogen, phosphorus and potash shall be based on laboratory tests on soils outlined in the landscape plans. For purpose of bidding, assume 8%

- nitrogen, 8% phosphorus and 8% potash by weight. At least 50% of the total nitrogen shall contain no less than 3% water-insoluble nitrogen.
- C. Fertilizer shall be delivered to the site, mixed as specified, in the original unopened standard size bags showing weight, analysis and name of manufacturer. Containers shall bear the manufacturer's guaranteed statement of analysis, or a manufacturer's certificate of compliance covering analysis shall be furnished to the Landscape Architect. Store fertilizer in a waterproof place and in such a manner that it will be kept dry and its effectiveness will not be impaired.
- D. Superphosphate shall be composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than 20% available phosphoric acid.
- E. Apply and distribute by methods and rates as recommended by manufacturer.

2.04 HERBICIDES

A. As recommended by the Florida State Department of Agriculture.

2.05 STAKES

A. Softwood, 3/4 inch diameter, 8 inch length.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Disk, till, and/or scarify soil to depth of 3" inches in all areas to be sodded to produce a loose, friable soil conducive to exceptional sod growth.
- B. Water dry soil to depth of 6 inches 48 hours before sodding.

3.02 INSTALLATION

- A. Transplant sod within 48 hours after harvesting.
- B. Repair all existing lawn areas disturbed by installation of irrigation and/or plantings which will not be sodded with new sod.
- C. Begin sodding at bottom of slopes.
- D. Lay first row of sod in straight line with long dimension of pads parallel to slope contours.
- E. Butt side and end joints. Ensure that joints are tight, thereby eliminating the need to patch and/or top dress to eliminate gaps.

- F. Stagger end joints in adjacent rows.
- G. Do not stretch or overlap rows.
- H. Peg sod on slopes greater than 1 in 3 with minimum of two stakes per square yard.
- I. Water sod immediately after transplanting.
- J. Roll sod, except on pegged areas, with roller weighing no more than 150 lbs. per foot of roller width. Schedule rolling of sod to ensure observation by Landscape Architect.
- K. Water sod and soil to depth of 6 inches within four hours after rolling.

3.03 LAWN ESTABLISHMENT

A. Watering:

- 1. Keep sod moist during first week after planting.
- 2. After first week, supplement rainfall to produce a total of 2 inches per week.
- 3. It is the Contractors responsibility for supplying water to all plant material.
- 4. The Contractor is responsible for providing water.

B. Mowing:

- 1. Maintain Sod as required until Substantial Completion between 3 inches and 6 inches in height. When grass reaches 6 inches in height, mow to 3 inches in height.
- 2. Do not cut off more than 50% of grass leaf in single mowing.
- 3. Remove all grass clippings throughout.
- C. Re-sod spots larger than 1 square foot not having uniform stand of grass. Cut and blend replacement sod into adjacent sod.
- D. Weed Eradication: Between second and third mowing, apply herbicide specifically recommended for grass type uniformly at manufacturer's recommended rate.
- E. Fertilizer: Apply fertilizer uniformly at manufacturer's recommended rate five days after sodding. Thoroughly water in to avoid "burning" or damaging grass.
- F. Establishment Period: The establishment period for sod shall be thirty (30) days from the date of installation. The Contractor shall be responsible for the maintenance of sod areas until Final Acceptance by the City according to the conditions of the Contract.

3.04 CLEANING

- A. Immediately clean spills from paved and finished surface areas.
- B. Remove debris and excess materials from project site.
- C. Dispose of protective barricades and warning signs at termination of lawn establishment.

3.05 SUBSTANTIAL COMPLETION, INSPECTION AND ACCEPTANCE

- A. A Substantial Completion inspection of the entire project shall be made upon written request of Contractor. At that time, if all Work is satisfactory and complete according to the conditions of the Contract, the Landscape Architect shall declare the Work substantially complete, subject to the terms of the Contract.
- B. Contractor's written request for review of the Work or any designated portion thereof shall be received by Landscape Architect at least five (5) business days before anticipated date of inspection.
- C. Sod that has died or is in unhealthy or badly impaired condition on inspection shall be treated or replaced within five (5) days at no additional cost to City.
- D. Replace or repair rejected sod within two weeks of inspection.
- E. Final Acceptance of the Work for the entire project shall constitute the beginning of guarantee period.
- F. Contractor's responsibility for maintenance (exclusive of replacement within guarantee period) shall terminate on date the entire project has reached Final Acceptance by the Landscape Architect according to the conditions of the Contract, provided Contractor has supplied Landscape Architect with three (3) copies of written maintenance instructions as required under Paragraph 1.04 of this Section.

END OF SECTION

SECTION 02950 LANDSCAPE SPECIFICATIONS

1.01 SCOPE OF WORK

- A. The work consists of: furnishing all labor, materials, equipment, tools, transportation, and any other appurtenances necessary for the completion of this project as shown on the drawings, as included in the plant list, and as herein specified.
- B. Work shall include maintenance and watering of all contract planting areas until certification of acceptability by the owner.

1.02 PROTECTION OF EXISTING STRUCTURES

A. All existing buildings, walks, walls, paving, piping, other site construction items, and planting already completed or established shall be protected from damage by the contractor unless otherwise specified. All damage resulting from negligence shall be repaired or replaced to the satisfaction of the owner, at no cost to the owner.

1.03 PROTECTION OF EXISTING MATERIALS OUTSIDE LIMIT OF WORK

A. The contractor shall be responsible for all unauthorized cutting or damage to trees and shrubs existing or otherwise, caused by careless equipment operation, material stockpiling, etc. This shall include compaction by driving or parking inside the drip-line and spilling oil, gasoline, or other deleterious materials within the drip-line. No materials shall be burned where heat will damage any plant. Existing trees killed or damaged so that they are misshapen and/ or unsightly shall be replaced at the cost to the contractor of one hundred dollars (\$100) per caliper inch on an escalating scale which adds an additional twenty (20) percent per inch over four (4) inches caliper as fixed and agreed liquidated damages. Caliper shall be measured six (6) inches above ground level for trees up to and including four (4) inches in caliper and twelve (12) inches above ground level for trees over four (4) inches in caliper.

1.04 MATERIALS

A. General materials listed below shall be submitted for approval. Upon submittals' approval, delivery of materials may commence.

Material	submittal
Mulch	product data
Topsoil Mix	amendment mix/ product data/ test results
Plants	photographs of one (1) of each species (or tagged in nursery) client-requested tagging may substitute photos.
	Indicate sizes (height/width) and quality per spec.
Fertilizer	product data
Inoculant	product data

LANDSCAPE SPECIFICATIONS

02950-1

PROJECT # 12166

Herbicide product data

Staking/Guying for alternate to details: send product data, detail

B. Plant materials

- a. Plant species and size shall conform to those indicated on the drawings. Nomenclature shall conform to standardized plant names, 1942 edition. All nursery stock shall be in accordance with grades and standards for nursery plants, latest edition, published by the Florida department of agriculture and consumer services. All plants shall be Florida grade no. 1 or better as determined by the Florida division of plant industry. All plants shall be healthy, vigorous, sound, well-branched, and free of disease and insects, insect eggs and larvae and shall have adequate root systems. Trees for planting in rows shall be uniform in size and shape. All materials shall be subject to approval by the owner. Where any requirements are omitted from the plant list, the plants furnished shall be normal for the variety. Plants shall be pruned prior to delivery only with approval from owner or owner's representative. No substitutions shall be made without written permission from the owner's representative
- b. Measurements: the height and/or width of trees shall be measured from the ground or across the normal spread of branches with the plants in their normal position. This measurement shall not include the immediate terminal growth. Plants larger in size than those specified in the plant list may be used if approved by the owner. If the use of larger plants is approved, the ball of earth or spread of roots shall be increased in proportion to the size of the plant.
- c. Inspection: plants shall be subject to inspection and approval at the place of growth, or upon delivery to the site, as determined by the owner, for quality, size, and variety; such approval shall not impair the right of inspection and rejection at the site during progress of the work or after completion for size and condition of root balls or roots, latent defects or injuries. Rejected plants shall be removed immediately from the site. Notice requesting inspection shall be submitted in writing by the contractor at least one (1) week prior to anticipated date.

1.05 SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

- A. Soil mixture (planting medium for plant pits) shall consist of 20% clean Florida muck and 80% clean sand. It shall contain three (3) to five (5) percent decomposed organic matter and a PH between 5.5 and 7.0 submit sample and PH testing results for approval.
- B. <u>Muck</u> (or mucky peat) for use in preparing soil mixture for backfilling plant pits muck shall be fertile, and of a very high organic content derived from Florida sources; reasonably free of subsoil, clay lumps, brush weeds and other litter; free of roots, stumps, stones larger than 2" in any direction, and other extraneous or toxic matter harmful to plant growth. For use in preparing soil mixture shall be coarse, clean, and well-draining.

- C. <u>Sand.</u> Contractor shall submit results of soil tests for topsoil and sand proposed for use under this contract for approval by the owner.
- D. Trees shall be planted in the existing native soil on site, unless determined to be unsuitable at which point the contractor shall contact landscape architect to prior to planting. Discuss alternate recommendation
- E. Contractor to submit samples of soil mixture for owner's representative approval prior to plant installation operations commence. F. Water necessary for planting and maintenance shall be of satisfactory quality to sustain an adequate plant growth and shall not contain harmful, natural or man-made elements detrimental to plants.

1.06 WATER

- A. Water meeting the above standard shall be obtained on the site from the owner, if available, and the contractor shall be responsible to make arrangements for its use by his tanks, hoses, sprinklers, etc. If such water is not available at the site, the contractor shall provide satisfactory water from sources off the site at no additional cost to the owner. *watering/irrigation restrictions may apply refer to property's jurisdictional authority.
- B. Contractor shall provide fertilizer application schedule to owner, as applicable to soil type, plant installation type, and site's proposed use. Suggested fertilizer types shall be organic or otherwise naturally-derived.
- C. Fertilizer restrictions may apply refer to property's jurisdictional authority.

1.07 <u>MULCH</u>

A. Mulch material shall be moistened at the time of application to prevent wind displacement, and applied at a minimum depth of 3 inches. Clear mulch from each plant's crown (base). Type of material: "florimulch" or shredded, sterile eucalyptus mulch

1.08 DIGGING AND HANDLING

- A. Protect roots or root balls of plants at all times from sun, drying winds, water and freezing, as necessary until planting. Plant materials shall be adequately packed to prevent damage during transit. Trees transported more than ten (10) miles or which are not planted within three (3) days of delivery to site shall be sprayed with an antitranspirant product ("Wiltpruf" or equal) to minimize transpiration water loss.
- B. Balled and burlapped plants (B&B) shall be dug with firm, natural balls of soil of sufficient size to encompass the fibrous and feeding roots of the plants. No plants moved with a root ball shall be planted if the ball is cracked or broken. Plants balled and burlapped or container grown shall not be handled by stems.

LANDSCAPE SPECIFICATIONS

02950-3

- C. Plants marked "BR" in the plant list shall be dug with bare roots, complying with, and current edition. Care shall be Florida grades and standards for nursery plants exercised that the roots do not dry out during transportation and prior to planting.
- D. Protection of palms (if applicable): only a minimum of fronds shall be removed from the crown of the palm trees to facilitate moving and handling. Clear trunk (CT) shall be as specified after the minimum of fronds have been removed. All palms shall be braced per palm planting detail. 5
- E. Excavation of tree pits shall be performed using extreme care to avoid damage to surface and subsurface elements such as utilities or hardscape elements, footers and prepared sub-bases.

1.09 CONTAINER GROWN STOCK

- A. All container grown material shall be healthy, vigorous, well-rooted plants established in the container in which they are sold. The plants shall have tops which are of good quality and are in a healthy growing condition, Florida #1 or better.
- B. An established container grown plant shall be transplanted into a container and grown in that container sufficiently long for the new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container. Container grown stock shall not be handled by their stems.
- C. Plant roots bound in containers are not acceptable.
- D. Substitution of non-container grown material for material explicitly specified to be container grown will not be permitted without written approval is obtained from the owner or owner's representative.

1.10 COLLECTED STOCK

A. When the use of collected stock is permitted as indicated by the owner or owner's representative, the minimum sizes of rootballs shall be equal to that specified for the next larger size of nursery grown stock of the same variety.

1.11 NATIVE STOCK

A. Plants collected from wild or native stands shall be considered nursery grown when they have been successfully re-established in a nursery row and grown under regular nursery cultural practices for a minimum of two (2) growing seasons and have attained adequate root and top growth to indicate full recovery from transplanting into the nursery row.

1.12 MATERIALS LIST

LANDSCAPE SPECIFICATIONS 02950-4

A. Quantities necessary to complete the work on the drawings shall be furnished by the contractor. Quantity estimates have been made carefully, but the landscape architect or owner assumes no liability for omissions or errors. Should a discrepancy occur between the plans and the plant list quantity, the landscape architect shall be notified for clarification prior to bidding or installation. All dimensions and/or sizes specified shall be the minimum acceptable size

1.13 FINE GRADING

- A. Fine grading under this contract shall consist of final finished grading of lawn and planting areas that have been rough graded by others. Berming as shown on the drawings shall be the responsibility of the contractor, unless otherwise noted.
- B. The contractor shall fine grade the lawn and planting areas to bring the rough grade up to final finished grade allowing for thickness of sod and/or mulch depth. This contractor shall fine grade by hand and/or with all equipment necessary including a grading tractor with front-end loader for transporting soil within the site.
- C. All planting areas shall be graded and maintained for positive drainage to surface/subsurface storm drain systems. Areas adjacent to buildings shall slope away from the buildings. Refer to civil engineer's plans for final grades.

1.14 PLANTING PROCEDURES

- A. Cleaning up before commencing work: the contractor shall clean work and surrounding areas of all rubbish or objectionable matter. All mortar, cement, and toxic material shall be removed from the surface of all plant beds. These materials shall not be mixed with the soil. Should the contractor find such soil conditions beneath the soil which will in any way adversely affect the plant growth, he shall immediately call it to the attention of the owner's representative. Failure to do so before planting shall make the corrective measures the responsibility of the contractor.
- B. Verify locations of all utilities, conduits, supply lines and cables, including but not limited to: electric, gas (lines and tanks), water, sanitary sewer, storm water systems, cable, and telephone. Properly maintain and protect existing utilities. Call national one call 811 to locate utilities.
- C. Subgrade excavation: contractor is responsible to remove all existing and imported limerock and limerock sub-base from all landscape planting areas to a minimum depth of 36". Contractor is responsible to backfill these planting areas to rough finished grade with clean topsoil from an on-site source or an imported source. If limerock or other adverse conditions occur in planted areas after 36" deep excavation by the contractor, and adequate percolation cannot be achieved, contractor shall utilize planting detail that addresses poor drainage.

LANDSCAPE SPECIFICATIONS

02950-5

- D. Furnish nursery's certificate of compliance with all requirements as herein specified and required. Inspect and select plant materials before plants are dug at nursery or growing site.
- E. General: comply with applicable federal, state, county, and local regulations governing landscape materials and work. Conform to accepted horticultural practices as used in the trade. Upon arrival at the site, plants shall be thoroughly watered and properly maintained until planted. Plants stored on-site shall not remain unplanted for a period exceeding twenty-four (24) hours. At all times, methods customary in good horticultural practices shall be exercised.
- F. The work shall be coordinated with other trades to prevent conflicts. Coordinate planting with irrigation work to assure availability of water and proper location of irrigation appurtenances and plants.
- G. All planting pits shall be excavated to size and depth in accordance with the USA standard for nursery stock 260.1, unless shown otherwise on the drawings, and backfilled with the prepared planting soil mixture as specified in section e. Test all tree pits with water before planting to assure proper drainage percolation is available. No allowance will be made for lost plants due to improper percolation. If poor percolation exists, utilize "poor drainage condition" planting detail. Trees shall be set plumb and held in position until the planting mixture has been flushed into place with a slow, full hose stream. All planting shall be performed by personnel familiar with planting procedures and under the supervision of a qualified landscape foreman. Proper "jetting in" shall be assured to eliminate air pockets around the roots. "Jet stick" or equal is recommended.
- H. Take all necessary precautions to avoid damage to buildings and building structures while installing trees.
- I. Soil mixture shall be as specified in section e of these specifications.
- J. Trees and shrubs shall be set straight at an elevation that, after settlement, the plant crown will stand one (1) to two (2) inches above grade. Each plant shall be set in the center of the pit. Planting soil mixture shall be backfilled, thoroughly tamped around the ball, and settled by water (after tamping).
- K. Amend pine and oak plant pits with ectomycorrhizal soil application per manufacturer's recommendation. All other plant pits shall be amended with endomycorrhizal soil application per manufacturer's recommendation. Provide product information submittal prior to inoculation.
- L. Fill hole with soil mixture, making certain all soil is saturated. To do this, fill hole with water and allow to soak minimum twenty (20) minutes, stirring if necessary to get soil thoroughly wet. Pack lightly with feet. Add more wet soil mixture. Do not cover top of ball with soil mixture, only with mulch. All burlap, rope, wires, baskets, etc.., shall be removed from the sides and tops of balls, but no burlap shall be pulled from underneath.

LANDSCAPE SPECIFICATIONS

02950-6

- M. Pruning: trees shall be pruned, at the direction of the owner or owner's representative, to preserve the natural character of the plant. All soft wood or sucker growth and all broken or badly damaged branches shall be removed with a clean cut. All pruning to be performed by licensed arborist, in accordance with ANSI A-300.
- N. Shrubs and ground cover plants shall be evenly spaced in accordance with the drawings and as indicated on the plant list. Cultivate all planting areas to a minimum depth of 6", remove and dispose all debris. Mix top 4" to achieve soil mixture as specified in section. Thoroughly water all plants after installation.
- O. Tree guying and bracing shall be installed by the contractor in accordance with the plans to insure stability and maintain trees in an upright position. If the contractor and owner decide to waive the tree guying and bracing, the owner shall notify the landscape architect in writing and agree to indemnify and hold harmless the landscape architect in the event unsupported trees planted under this contract fall and damage person or property.
- P. Mulching: provide a three inch (minimum) layer of specified mulch over the entire area of each shrub bed, ground cover, vine bed, and tree pit planted under this contract.
- Q. Herbicide weed control: all plant beds shall be kept free of noxious weeds until final acceptance of work. If directed by the owner, "round-up" shall be applied for weed control by qualified personnel to all planting areas in spot applications per manufacturer's precautions and specifications. Prior to final inspection, treat all planting beds with an approved pre-emergent herbicide at an application rate recommended by the manufacturer. (as allowed by jurisdictional authority)

1.15 LAWN SODDING

- A. The work consists of lawn bed preparation, soil preparation, and sodding complete, in strict accordance with the specifications and the applicable drawings to produce a turf grass lawn acceptable to the owner.
- B. Lawn bed preparation: all areas that are to be sodded shall be cleared of any rough grass, weeds, and debris and the ground brought to an even grade. The entire surface shall be rolled with a roller weighing not more than one-hundred (100) pounds per foot of width. During the rolling, all depressions caused by settlement shall be filled with additional soil, and the surface shall be regarded and rolled until presenting a smooth and even finish to the required grade.
- C. Soil preparation: prepare loose bed four (4) inches deep. Hand rake until all bumps and depressions are removed. Wet prepared area thoroughly.
- D. Sodding

- a. The contractor shall sod all areas that are not paved or a. Planted as designated on the drawings within the contract limits, unless specifically noted otherwise.
- b. The sod shall be certified to meet Florida state plant board specifications, absolutely true to varietal type, and free from weeds, fungus, insects and disease of any kind. Sod panels shall be laid tightly together so as to make a solid sodded lawn area.
- c. Sod shall be laid uniformly against the edges of all curbs and other hardscape elements, paved and planted areas. Adjacent to buildings, a 24 inch stone mulch strip shall be provided refer to details. Immediately following sod laying, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly irrigated. If, in the opinion of the owner, top-dressing is necessary after rolling to fill the voids between the sod panels and to even out inconsistencies in the sod, clean sand, as approved by the owner's representative, shall be uniformly spread over the entire surface of the sod and thoroughly watered in. Fertilize installed sod as allowed by property's jurisdictional authority.
- E. During delivery, prior to, and during the planting of the lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun. All sod shall be stacked so as not to be damaged by sweating or excessive heat and moisture. 6.

F. Lawn maintenance:

- a. Within the contract limits, the contractor shall produce a dense, well established lawn. The contractor shall be responsible for the repair and re-sodding of all eroded, sunken or bare spots (larger than 12"x12") until certification of acceptability by the owner's representative. Repaired sodding shall be accomplished as in the original work (including re-grading if necessary).
- b. Contractor responsible for establishing and maintaining sod/lawn until acceptance by the owner's representative. Prior to and upon acceptance, contractor to provide watering/irrigation schedule to owner. Observe all applicable watering restrictions as set forth by the property's jurisdictional authority.

1.16 CLEANUP

A. Upon completion of all planting work and before final acceptance, the contractor shall remove all material, equipment, and debris resulting from his work. All paved areas shall be broom-cleaned and the site left in a neat and acceptable condition as approved by the owner's authorized representative.

1.17 PLANT MATERIAL MAINTENANCE

A. All plants and planting included under this contract shall be maintained by watering, cultivating, spraying, and all other operations (such as re-staking or repairing guy

LANDSCAPE SPECIFICATIONS

02950-8

supports) necessary to insure a healthy plant condition by the contractor until certification of acceptability by the owner's representative. Maintenance after the certification of acceptability shall be in accordance with the specifications in this section. Contractors are requested to provide a bid estimate to cover landscape and irrigation maintenance for a period of 90 calendar days commencing after acceptance.

1.18 MAINTENANCE

A. Contractors are requested to provide a bid estimate for maintenance following the initial 90-day maintenance period on a cost-per-month basis.

1.19 FINAL INSPECTION AND ACCEPTANCE OF WORK

A. Final inspection at the end of the warranty period shall be on planting, construction and all other incidental work pertaining to this contract. Any replacement at this time shall be subject to the same one (1) year warranty (or as specified by the landscape architect or owner in writing) beginning with the time of replacement and ending with the same inspection and acceptance herein described.

1.20 <u>WARRANTY</u>

- A. The life and satisfactory condition of all 7 gallon and larger plant material installed by the landscape contractor shall be warranted by the contractor for a minimum of one (1) calendar year commencing at the time of certification of acceptability by the owner's representative.
- B. The life and satisfactory condition of all other plant material (including sod) installed by the landscape contractor shall be warranted by the contractor for a minimum of one (1) calendar year commencing at the time of certification of acceptability by the owner's representative.
- C. Replacement: any plant not found in a healthy growing condition at the end of the warranty period shall be removed from the site and replaced as soon as weather conditions permit. All replacements shall be plants of the same kind and size as specified in the plant list. They shall be furnished planted and mulched as specified under "planting", at no additional cost to the owner.
- D. In the event the owner does not contract with the contractor for landscape (and irrigation) maintenance, the contractor is encouraged to visit the project site periodically during the one year warranty period to evaluate maintenance procedures being performed by the owner, and shall notify the owner in writing of maintenance procedures or conditions which threaten vigorous and healthy plant growth. It is suggested such site visits shall be conducted a minimum of once per month for a period of twelve (12) months from the date of acceptance.

END OF SECTION

LANDSCAPE SPECIFICATIONS

02950-9

SECTION – 16010 (ES) ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

1.01 SCOPE OF WORK:

This Section includes the electrical provisions for all of Division 16, electrical and related work.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

General Requirements Division 1

1.03 DEFINITIONS:

Provide means to furnish and install.

1.04 SUBMITTALS:

- A. Submit Shop Drawings for review as indicated. Shop Drawings shall be submitted in complete groups, loose-leaf bound, and indexed, including descriptive data, catalog cuts, diagrams, connection details, wiring dimensions, material and finishes.
- B. Submit manuals for review as indicated. Manuals shall include operating and maintenance instructions, parts lists, manufacturers and local suppliers addresses and pertinent descriptive data. Manuals shall be loose-leaf bound and indexed in three ring hardcover binder.
- C. Submit a minimum of 6 sets of Shop Drawings and 3 sets of manuals. One full set will be kept by the Project Consultant.

1.05 DRAWINGS:

A. The drawings are schematic showing relative locations and connections and shall not be scaled for exact locations. Unless specific dimensions are shown, the structural, architectural and site conditions shall govern the exact locations. Should any difficulty occur in the running of conduits, setting of cabinets, outlets, fixtures, or any other devices or connections at the points shown, provide necessary minor deviations therefrom as approved without additional cost.

1.06 RECORD DRAWINGS AND RECORDS:

A. Maintain a complete set of electrical prints for indicating all changes including Addendas executed, R.F.I.'s, Response to R.F.I.'s, Deviations, Cross References, etc. Use colored pencil or pen to mark changes at the time of execution. Deliver the set to the Owner's Representative upon completion. The As-Builts will be checked each month for compliance prior to release of any progress payments.

Elevations and dimensioned locations of underground work shall be indicated. Dimension to permanent references.

B. Submit Xeroxed copies of all typed panel directories for approval prior to placing in panels and switchboards. Submittal shall be in loose-leaf 3-ring binder, 8-1/2" x 11".

PART 2 - PRODUCTS

2.01 MATERIALS:

Materials and equipment shall be new, standard current products of manufacturers regularly engaged in the production of such equipment, and shall be the manufacturer's latest design. All materials shall bear the label of the Underwriters' Laboratory for the intended use or shall be materials approved by the code enforcing authorities and the Project Consultant.

2.02 <u>HARDWARE:</u>

All hardware and accessory fittings shall be of a type designed, intended or appropriate for the use, and complement the items with which they are used, and shall have corrosion protection suitable for the atmosphere in which they are installed. All such hardware shall be U.S. Standard sizes.

2.03 EQUIPMENT:

Equipment of a similar nature shall be identical.

Example: All panelboards shall be of the same manufacturer and of the same style.

2.04 MATERIAL PROTECTION:

Store and protect all materials from injury prior to installation. Materials shall not be stored directly on the ground or floor and shall be kept as clean and dry as possible and free from damage or deteriorating elements. Damaged materials shall not be installed.

2.05 SHOP DRAWINGS:

Submit coordinated shop drawings at 1/2 inch scale, not reduced, using actual sizes and weights of vendors equipment. Drawings shall consist of floor plan and elevations of each significant wall. Ducts or foreign pipes may not encroach over panels and switchboards. Show NEC required clearances. Upon completion of the project the drawings shall be updated with incidental items such as relays, time clocks, contactors, etc. The following shall be submitted:

Main Switchroom - - Electric Room.

PART 3-EXECUTION

3.01 <u>INSTALLATION:</u>

- A. The electrical installation shall conform to the Florida Building Code, 2007, the NFPA Standards indicated, and the applicable standards, codes, regulations, and specifications listed therein and with these specifications and the standards, codes and regulations listed therein.
- B. All equipment shall be set level, properly aligned and bolted together where in sections. Secure all materials and equipment firmly in place. All screws, bolts, nuts, clamps, fittings or other fastening devices shall be made up tight. All materials and equipment shall be installed complete including screws or bolts, covers, plates, fittings, etc. Follow the installation directions and recommendations of the material and equipment manufacturers.
- C. Fol1ow the instal1ation directions and recommendations of the material and equipment manufacturers.
- D. Materials damaged during installation shall be repaired to a new condition or shall be replaced. Finishes on equipment which have been scratched or marred shall be touched up to match the original finish or shall be completely refinished.
- E. All enclosures, panels, cabinets, relays safety switches, fixtures and other exposed equipment or accessories shall be factory painted or finished except as indicated otherwise. Group mounted items shall be similar in finish and color.

3.02 IDENTIFICATION:

- A. Tag all conductors and identify major conduits in or at home runs, wireways, panels, pull boxes, switchboards, motor controllers, cabinets and similar items to assist in future circuit tracing. Conductor tags shall be non-conductive. Identification shall correspond to the Contract Documents.
- B. All junction boxes shall have the type of system and voltage of contained conductors stenciled on both the inside and outside of the box cover.
 Examples: Power 277/480V Control 120V

Telephone

Sound & Intercom Clock 120V

Lights 120/208V

C. Identify all equipment as to its source, its use and what it serves, and characteristics. Equipment includes safety switches, starters, transformers, panels, terminal boxes, motors, special outlets, relays. Identification shall correspond to the terminology on the Contract Documents.

Examples:

- 1. Starter for AHU #1 Fed from MCC-3
- 2. Transformer T-3 Fed from 2HPD-3 Serves Panel 2LDP
- 3. Emergency Stop Station
- 4. Panel 3L -120/208V-3 Phase-4 Wire Fed from 2LDP-7

- D. Use Brady markers on conductors. Use manufacturer's nameplates and directories where available. Use of Dymo Labels will not be permitted. Use of uniform painted stencils will be permitted. Submit other methods for approval. Provide plastic lamicoid engraved plates to properly cleaned surfaces for good adhesion or provide fastening screws.
- E. Color Coding Conductor colors shall be in accordance with the NEC and NFPA requirements. Refer also to applicable sections of these specifications. Three phase feeders and branch circuits shall be identified as follows:

120/208 277/480V A - Black A - Brown B - Red B - Orange C - Yellow C - Blue N - White N - Grav

F. Nameplates: The following items shall be equipped with nameplates: all motors, motor starters, motor control centers, pushbutton stations, control panels, time switches, disconnect switches, switchboards, panelboards, circuit breakers, contactors or relays in separate enclosures, receptacles, wall switches, high voltage boxes and cabinets. All light switches and outlets shall carry a phenolic plate with the supply circuit number. Special electrical systems shall be identified at junction and pullboxes, terminal cabinets and equipment racks.

Nameplates shall adequately describe the function of the particular equipment involved. Nameplates for panelboards and switchboards shall include the panel designation, voltage and phase of the supply. For example, "Panel A, 277/480V, 3 phase, 4 wire". The name of the machine on the motor nameplates for a particular machine shall be the same as the one used on all motor starters, disconnect and P.B. station nameplates for that machine.

Normal power nameplates shall be laminated phenolic plastic with lettering etched through the outer covering; white engraved letters on black background. All nameplates for emergency power equipment shall be red with white letters. Lettering shall be 3/16 inch high at pushbutton stations, thermal overload switches, receptacles, wall switches and similar devices, where the nameplate is attached .to the device plate. At all other locations, lettering shall be 1/4 inch high, unless otherwise detailed on the drawings.

Nameplates shall be securely fastened to the equipment with No. 4 Phillips, round head, cadium plated, steel self-tapping screws or nickel-plated brass bolts. Motor nameplates may be non ferrous metal not less than 0.03 inch thick, die stamped. In lieu of separate plastic nameplates, engraving directly on device plates is acceptable. Engraved lettering shall be filled with contrasting enamel. Equipment nameplate schedule for all equipment shall be submitted with shop drawing submittal for engineer's approval.

All junction and splice boxes shall be labeled using permanent shipping tags attached to boxes; not covers. Device plates including receptacles and toggle switches may be identified with adhesive tape units as manufactured by Brothers "P-Touch". Use suitable color, contrast, and sizes.

G. <u>Sign</u> - Warning signs shall comply with OSHA requirements and reasonable safety precautions.

3.03 TOOLS & SPARE PARTS:

A. Use only tools designed for the particular operation. Tools shall be kept in good condition. Worn or broken tools shall not be used. Wrench and vise teeth shall be sharp and clean to prevent damage to the materials. Screw drivers and wrenches shall be of the proper size to prevent damage to the head or nuts. Special tools and spare parts provided with any equipment shall be turned over to an authorized person from the City and the Contractor shall obtain signed and dated receipts for them.

3.04 <u>TESTS:</u>

A. Correct all defective materials and workmanship disclosed and as the result of the tests given herein. Show by demonstration in service that all circuits and devices are in good operating condition. Tests shall be such that each item of control equipment will function not less than five times. Test all circuits for grounds, shorts and continuity. Provide all materials and equipment necessary for testing.

3.05 DEMONSTRATION:

A. Demonstrate the essential features of the following electrical systems upon completion of satisfactory testing:

Emergency System
Lighting System
Sound System
Main Switchboard
Contactors

B. The demonstration shall be held by the Contractor in the presence of the Owner or his designated representatives and the Project Consultant to show functions, locations and relationships to the plans. Demonstrate how to "Start-Stop", reset, replace and emergency procedures. Demonstrate one system at a time.

3.06 BREAKDOWN:

A. The Contractor shall submit to the Owner's Representative within a period not to exceed 15 days after the signing of the contract a systematic breakdown of the cost of each phase of the work for complete job.

END OF SECTION

SECTION – 16011 (ES) CODES & STANDARDS

PART 1 - GENERAL

1.01 This Section covers the Codes, Specifications, and Standards considered minimum requirements for materials, workmanship and safety for all Division 16 and related electrical work.

PART 2 - SPECIFICATIONS, CODES AND STANDARDS

2.01 Reference within this Specification to standards, codes or reference specifications implies that any item, product or material so identified must comply with all minimum requirements as stated therein, except packaging and shipping, unless indicated otherwise. Only the latest revised editions are applicable. Some of the references used in this Division are as follows:

NFPA National Fire Protective Association

NEC National Electric Code

NEMA National Electrical Manufacturers' Association

U.L. Underwriters' Laboratories, Inc.

ANSI American National Standards Institute

FS Federal Specification

2.02 The Specifications, codes and standards indicated below and in other Sections, including the current addenda, amendments and errata, referred to by basic designation only. form a part of this specification.

NFPA-70 2008 National Electric Code NFPA-101 2003 Code for Safety to Life

F.B.C. 2007 Florida Building Code, 2009 Revisions

IESNA 9th Edition Illuminating Engineering Society, North America

PART 3 - NATIONAL RECOGNIZED TESTING LABORATORY - NRTL

- 3.01 Where materials and equipment are available under the continuing inspection and labeling service of U.L.; provide such material and equipment.
- 3.02 Listing by Underwriters' Laboratories shall be evidenced by the label or: U.L. Electrical Construction Materials List (Green Book)

U.L. - Electrical Appliance and Utilization Equipment List

U.L. - Building Materials List

3.03 Listing by National Recognized Testing Laboratory (NRTL).

END OF SECTION

SECTION – 16110 (ES) RACEWAY AND BOXES

PART 1 - GENERAL

1.01 SCOPE:

This Section includes basic materials and electrical methods for all of Division 16, electrical and related work.

PART 2 - PRODUCTS

2.01 RACEWAYS AND FITTINGS:

- A. Rigid Metal Conduit: Rigid steel conduit shall be hot dip galvanized.
- B. <u>Electrical Metallic Tubing (EMT)</u>: EMT shall be galvanized and fittings shall be concrete tight or rolled steel, not cast type. Non-ferrous cast type fittings are not acceptable.
- C. <u>Flexible Metal Conduit</u>: Flexible steel conduit (Greenfield) shall be galvanized. Liquid tight flexible conduit shall conform to NEC Article 351 as manufactured by Appleton, Robroy, or Anaconda. Fittings shall be as manufactured by Midwest or Robroy.
- D. <u>Rigid Non-Metallic Conduit</u>: Polyvinyl chloride (PVC) conduit, boxes and fittings shall conform to NEMA TC-2, Schedule 40.
- E. <u>Wireways and Auxiliary Gutters</u>: Galvanized steel with removable covers unless indicated as hinged. Components shall be as manufactured by Square 'D', Hoffman, Keystone or General Electric.

2.02 BOXES & ACCESSORIES:

- Sheet steel boxes and accessories shall be as manufactured by Appleton, Steel City or Raco.
- B. Cast metal ferrous outlets shall be as manufactured by Appleton, Pyle-National or Crouse-Hinds.
- C. Pull boxes and junction boxes larger than 4-11/16" shall be constructed of galvanized steel in accordance with NFPA-70, Articles #370 and #373. Boxes shall be as manufactured by Hoffman, Boss or Keystone.

RACEWAY & BOXES 16110 (ES)-1

D. Cast outlet boxes shall have threaded conduit entrances and gasketed covers. Aluminum type not permitted. Boxes shall have a minimum of two hubs on the bottom. Appleton or Crouse-Hinds.

2.03 IN-GROUND PULL BOXES:

A. Shall be as manufactured by Quazite or equal; UL Listed, open bottom type.

2.04 EXPANSION FITTINGS:

Expansion fitting shall be as manufactured by O-Z Electrical Mfg. Company as follows:

Rigid Metal Conduit - Type AX Electrical Metallic Tubing - Type TX

2.05 MISCELLANEOUS:

Coatings - Koppers #50 bitumastic.

PART 3 - EXECUTION

3.01 RACEWAYS:

- A. Paint metal conduit in or below ground floor slab or in the ground with 2 coats of bitumastic.
- B. Use flexible conduit for all connections to vibrating equipment such as motors, valves, and devices on piping and ductwork. Flexible conduit may be used for short connections to control devices, recessed fixtures, and similar items. The connection between the structure and the first point of attachment to vibrating equipment shall be flexible.
- C. Use liquid-tight flexible conduit connections to all equipment in damp locations and all motors. Provide a separate bond wire for all flexible conduits.
- D. Install exposed conduit parallel with or at right angles to the building lines. Conduit at suspended ceilings shall be located, when practicable, between the slab and the ceiling. Conduit larger than 1", except as indicated, in reinforced concrete slabs shall be parallel with or at right angles to the main reinforcement; when at right angles to the supports of the slab. Conduit in concrete shall be located so as not to affect the structural strength of the slabs. Conceal all conduits in walls, above ceilings, in or under slabs or in furring, except in mechanical and electrical rooms and as indicated.

RACEWAY & BOXES 16110 (ES)-2

F. Route feeders, home runs and conduits where indicated, except that minor deviations as approved will be permitted.

3.02 BOXES AND ACCESSORIES:

- A. Minimum size outlet box shall be 4" square by 1-1/2" deep unless approved or indicated otherwise.
- B. Use cast ferrous metal outlets with gasketed covers for all exterior and for all damp locations.
- All boxes shall be set plumb, square and level. Crossbrace boxes in metal studs.
- D. Use 10/32 screw to ground all boxes.

3.03 MISCELLANEOUS:

- A. Provide approved fire stopping materials at all chases to prevent drafts.
- B. Provide cable supports as indicated and in accordance with Article 300-10.
- Provide expansion fittings in conduit runs crossing expansion joints in the structure.
- D. Provide Jet Line #232 in all empty conduits.

END OF SECTION

RACEWAY & BOXES 16110 (ES)-3

SECTION – 16120 (ES) CONDUCTORS

PART 1 - GENERAL

This Section includes basic materials and methods for all of Division 16, electrical and related work.

1.01 APPLICABLE REQUIREMENTS:

NEC Article 310 and 400 F.S. J-C-30 F.S. W-S-6106

PART 2 - PRODUCTS

2.01 CONDUCTORS:

- A. Conductors shall conform to Federal Specification J-C-30 for 600 volt. Types THWN or THHN. Sizes are AWG unless noted and all stranded copper.
- B. Grounding conductors shall be insulated copper and identified green.
- C. Control conductors for 100 to 600 volt shall be size #14 copper, stranded, and color coded unless indicated otherwise.
- D. Control conductors for 50 volt and under shall be plastic jacketed thermostat cable, size #18 single conductor, copper, multi-conductor as required.

2.02 PORTABLE CORDS:

- A. Portable cord shall be stranded copper, UL Listed, and resistant to water, acid and alkalies.
- B. Each cord shall have one green covered conductor and it shall be used as a grounding conductor.

2.03 SPLICES AND TERMINATIONS:

- A. Connections shall comply with Federal Specification W-S-610b. Connectors for temperatures to 105 degree C shall be Ideal Wing Nut or 3M-Scotchloc.
- B. Tape shall be Scotch 33 or slip-knot gray. Voids shall be filled with rubber tape or Scotchfill.

CONDUCTORS 16120 (ES)-1

C. Heat shrink for all splices outdoors. Insulating and sealing of all 600 volt, inline, cable splices from #16AWG through 1000MCM shall be done in accordance with the instructions provided with the Shrink-Kon heat shrinkable insulators, catalog series HS as manufactured by Thomas & Betts.

PART 3 - EXECUTION

3.01 CONDUCTORS:

- A. Conductors size #10 and smaller shall be copper and have insulation colored for phases A, B, C and N respectively as follows for 3 phase systems: 120/208 volts, black, red, blue, and white 277/480 volts, brown, orange, yellow and gray
- B. Bonding conductors size #10 and smaller shall have a green covering and shall be the same size as the circuit conductors unless otherwise indicated. Provide bonding conductors in all power and lighting conduits and bond all light fixtures and receptacles.
- C. Installation of conductors shall be made only in completed raceway systems and all conductors in any conduit shall be pulled in together
- Use wire pulling compounds or lubricants as listed by Underwriters' Laboratories or talc, graphite or soapstone.

3.02 **SPLICES AND TERMINATIONS:**

- A. Use solderless terminal lugs on all stranded conductors. Use approved solderless connectors for all splices. Keep splices to a minimum.
- B. Splice all neutrals and grounds (bonds) prior to connection to wiring devices. Splices other than pre-insulated connectors shall be covered neatly with insulation type equivalent in value to the conductor insulation. Use minimum of 2 layers of tape.
- C. Splices outdoors and underground shall be epoxy encapsulated or heat shrink (no wire nuts or red head type allowed).

3.03 PHASING AND IDENTIFICATION:

A. The phase designation of all secondary conductors shall be the same and shall be indicated in or on all 3 phase outlets, transformers panelboards, and disconnect switches, and they shall be connected with uniform phase sequence.

CONDUCTORS 16120 (ES)-2

3.04 NUMBER OF CONDUCTORS:

- A. For convenience and simplicity wire tics are shown only on home runs other than power circuits. The Contractor shall determine the correct combination of wires to be run in all raceways including home runs, branch circuit wiring and switch legs.
- B. A green ground wire must be included in all runs including to lighting fixtures in the ceilings. Neutral wires shall be determined by the load and proper phasing on multiwire branch circuits.
- C. The following schedule shall be followed including ground wires and neutrals:

	<u>MAX</u>
3/4"C	5 #12
1"C	10 #12

3.05 <u>Wire:</u>

- A. Type THWN stranded copper wire shall be used in all locations with one exception, where the conduit or wire is subjected to undue heat condition, type THHN should be used. Under no condition will wire smaller than #12 AWG be used. Wiring for fixtures where undue heat conditions prevail shall be with 150 degrees C. wire. (Stranded conductors only)
- B. Minimum conductor sizes shall be Branch Circuit #12 CU., Control Circuits #14 CU, Thermostat #16 CU.

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END OF SECTION

SECTION – 16140 (ES) WIRING DEVICES

PART 1 - GENERAL

1.01 APPLICABLE DOCUMENTS:

NEMA WD-1 - Wiring Devices - non-locking NEMA WD-5 - Wiring Devices - locking type

PART 2 - PRODUCTS

2.01 <u>ACCEPTABLE MANUFACTURERS & MATERIALS</u>

Provide, where indicated, specification grade wiring devices conforming to NEMA requirements.

2.02 RECEPTACLES:

All receptacles shall be specification grade of the grounding type, unless noted, and shall conform to applicable portions of NEMA Standards WD-1 and WD-5.

A. NEMA Configuration #5-30 Single, Ivory, 30 amp, 125 volt, 2-pole, 3-wire Bryant - #9530-FR Receptacle and 9530 ANP Plug General Electric - #4138-3 and 4337-9 Leviton - #5371

B. Duplex Receptacles 20 Amp Hubbell #5362-1 Leviton #5896-1 P & S #5362-1

C. Single Receptacles 20 Amp Hubbell #5351-1 Leviton #5891-1 P & S #5361-1

D. Ground Fault Interrupter 20 Amp Hubbell #GF5362-1 Leviton #6398-HG1 P & S #2091-FI; SHG

E. Combined switch and receptacles shall be two separate devices utilizing a two-gang box and single cover plate.

2.03 SWITCHES:

WIRING DEVICES 16140 (ES)-1

A. Single Pole Switches 20 Amp, 120/277 Volts Hubbell #1121-1, 3 way & 4 way similar.

Leviton #53521-1

P & S #20AC1-1

- B. Key Switches (lock Switched), 20 amp, 120-277 Volt P&S #521-L, 522-L, 523-L
- C. ON/OFF motor switches, single phase
 20 Amp, 1 HP, 120 volt P&S #20AC2-HP
 20 Amp, 2 HP, 208-240 volt P&S #20AC2-HP
 30 Amp, 2 HP, 120-240 volt P&S #30AC2-HP
- D. Spring wound interval timer switch, rotary 20A-125 volt/10A-277 Volt SPST 0-15 Minute without hold Tork 515M 0-6 Hour without hold Tork 506H

2.04 CONTACTOR CONTROL SWITCHES:

- A. Provide a suitable remote switch to turn the mechanically held contactors "on" and "off" from the locations indicated. See Detail on Drawings.
- B. P & S #1251-1 or Leviton #1257, 20 amp, SPDT, 3 position, center off, momentary contact switch and identified plate "open" at bottom and "close" at top.

2.05 PLATES AND COVERS:

- A. General Device plates shall be 0.040 inch minimum, with struck-up beveled edges, void of sharp corners and multigang as applicable. Finish of screws shall match plates.
- B. Wall plates for recessed devices shall be of Ivory color with matching screws unless indicated otherwise, and of the configuration required for the devices installed. Units shall be smooth high impact type, Nylon, self extinguishing thermoplastic conforming to NEMA and ANSI Standards. Pass & Seymour RP Series or Leviton 8000 Series.
- C. Surface (raised) covers for 4" square boxes shall be 1/2" deep. Surface covers shall be as manufactured by Steel City, Appleton or Raco of the configuration required. Others shall be similar.
- D. Cover plates indicated (WP) weatherproof shall be Intermatic Series WP1000 for the configuration required.
- E. Provide permanent ID on all plates/devices.

2.06 ATTACHMENT CAPS AND CONNECTORS:

WIRING DEVICES 16140 (ES)-2

- A. Caps shall be NEMA Standard mates to the receptacles and connectors used and shall be as manufactured by Hubbell.
- B. Provide one cap for each receptacle other than the duplex type, NEMA 5-15, 5-20, or 5-30.
- C. Electrical contractor shall connect all equipment furnished by Owner or other contractors, including caps and cords and materials required to complete the installation.

PART 3 - EXECUTION

3.01 OUTLETS & SWITCHES:

- A. Install plates and covers on all outlets. Install all devices uniformly in each area.
- B. Use 20 ampere switches and receptacles everywhere except as noted.

3.02 **GROUNDING**:

A. Grounding contacts of receptacles shall be connected to a system grounding conductor (not system neutral) by a copper wire not smaller than #12 AWG. Where symbol "G" is shown, the green grounding wire must be pulled and used throughout the branch circuit.

3.03 CAPS:

 A. Install a suitable cord and cap (male plug) on all equipment including: Equipment furnished under the contract.
 Equipment furnished by owner and installed by contractor.
 Equipment furnished by owner without a suitable cord and cap.

3.04 <u>MOUNTING:</u> (See Section 16110)

- A. Mounting heights (to center of box):
 Generally mount outlets 18" up unless noted.
 Mount switches and dimmers at 48" up.
- B. Test each socket of each outlet with a device intended for the purpose. Gang switches and dimmers where feasible.
- 3.05 <u>G.F.C.I. RECEPTACLES</u>: (No downstream non-GFCI is allowed) Provide GFCI duplex receptacles as shown and at all the following locations.
 - A. Outdoors

WIRING DEVICES 16140 (ES)-3

SECTION – 16160 (ES) PANELBOARDS

PART 1 - GENERAL

1.01 <u>RELATED WORK SPECIFIED ELSEWHERE:</u>

Circuit Breakers, Switches Section 16180 Starters Section 16920 Contactors Section 16917

1.02 APPLICABLE DOCUMENTS:

NEMA PB-1 Panelboards

S.F. W-P-115a Panelboards NFPA-70, 2005 Articles 110, 240, 384

1.03 <u>SUBMITTALS</u>:

A. Submit Shop Drawings for review on each panelboard and terminal cabinet indicating cabinet dimensions, component arrangements, characteristics, and sizes.

PART 2 - PRODUCTS

2.01 PANELBOARDS:

- A. Panelboards shall conform to Federal Specification W-P-115a, complete with cabinets and locks.
- B. Fronts shall be finished to resist corrosion with not less than one priming coat and one pearl gray finishing coat. Components shall be arranged approximately as indicated. Circuits shall be numbered serially from top to bottom with odd numbers on the left.
- C. Adjacent poles of single pole devices shall be of opposite polarity with splitphase bussing. Provide keys, each of which will operate all the panelboard cabinet locks. Provide a typewritten directory with a transparent protective cover on the inside of the panelboard cover.
- D. Panels shall be factory assembled and tested. Circuit breaker panelboards shall be Type I, Class I, bolt-on type. Fusible panelboards, where indicated shall be Type II, Class 1, and shall have fuses of the rating indicated. Panelboards shall be as manufactured by Square 'D', General Electric,

PANELBOARDS 16160 (ES)-1

- Cutler-Hammer, or Siemens. Nominal width shall be 22". All bus must be copper. Provide grounding terminal bus for all panelboards
- E. Contactors mounted in panelboards shall be completely factory prewired and shall have suitable access door and control wiring and diagram.

PART 3 - EXECUTION

- 3.01 Mount all panels with tops at 6' above the floor, except as noted or approved otherwise. Mount grouped equipment on backboards. Identify all panels and all devices. Nipple all adjacent panels together with minimum 1-1/2" conduit. Clean all debris out of cabinets prior to installing covers..
- 3.02 Where electric panels are located in rooms other than electric rooms, the clearances required by Code shall be guaranteed by a painted rectangle the width of the panel and the depth per NFPA-7 0, Table 110-16 (a). Stencil within the rectangle, "No Storage".

END OF SECTION

PANELBOARDS 16160 (ES)-2

SECTION – 16180 (ES) SAFETY SWITCHES, CIRCUIT BREAKERS & FUSES

PART 1- GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE:

Panelboards - Section 16160
Motor Controls - Section 16920
Ballasts Fuses - Section 16500

1.02 <u>APPPLICABLE DOCUMENTS:</u>

NEMA AB-1 - Molded Case Circuit Breakers

NEMA IC-1 - Industrial Control F.S. W-S-865c - Enclosed Switches F.S. W-C-375a - Circuit Breakers

U.L.-198 - Fuses NEMA FU-1 - Fuses

1.03 <u>SUBMITTALS:</u>

Submit Shop Drawings for review including catalog cuts showing sizes, types and characteristics of all products.

PART 2 - PRODUCTS

2.01 SAFETY SWITCHES/CIRCUIT BREAKER DISCONNECTS:

- A. Safety switches shall conform to Federal Specifications W-S-865c, heavy duty type HD, fusible or non-fusible, with the poles, ampere, voltage and horsepower ratings indicated and shall have solid neutrals and Class R clips. Lugs shall be U.L. listed for copper-aluminum.
- B. Enclosures for safety switches shall be NEMA-1, general purpose, except that switches indicated (WP) weatherproof, shall be NEMA-3R unless marked NEMA-4. Provide hubs as required for NEMA-3R enclosures with suitable gaskets and bonding means.
- C. Switches and disconnects shall be as manufactured by Square 'D', General Electric, Cutler-Hammer or Siemens.

D. Circuit breaker disconnects may be used in lieu of safety switches providing they comply with the safety switch requirements and are applied within their ratings and a schedule is submitted for approval.

2.02 <u>CIRCUIT BREAKERS, MOLDED CASE:</u>

- A. Circuit breakers shall conform to Fed. Spec. W-C-375a and NEMA Standard AB-1 unless indicated otherwise. Circuit breakers shall be of the ampere rating, voltage rating, number of poles and class or interrupting capacity (I.C.) as indicated. Interrupting ratings are given in root mean square (RMS), symmetrical ampers based on NEMA test procedures. Lugs and terminals shall be U.L. listed for copper-aluminum. Accessories shall be 120 volt.
- B. Each circuit breaker shall have a trip unit for each pole with elements providing inverse time delay under overload conditions and instantaneous magnetic trip for short circuit protection unless indicated as non automatic. Trip elements shall operate a common trip bar to open all elements.

2.03 Fuses:

- A. Provide rejection fuses for all fusible equipment regardless of which section has furnished such equipment.
- B. Fuses shall be of the ratings shown on the drawings, U.L. listed and shall be Bussman Manufacturing Co., Gould-Shawmut Company, CEFCO or approved equal.
- C. All fuses shall be current limiting and have an interrupting capacity of at least 200,000 amperes RMS symmetrical.
- D. The time-current characteristics and ratings shall be such that positive selective coordination is assured.
- E. Fuses, 600 amperes and lower, where applied to general feeder and branch circuit protection, shall conform to U.L. Class RK-1 standards and be Bussmann Type LPN-RK-SP LPS-RK-SP, "Low Peak". Gould-Shawmut dual element "Amp-Trap."
- F. Fuses, where required for circuit breaker protection shall conform to U.L. Class RK-1 standards and be Bussmann Type LPN-RK-SP or LPS-RK-SP "Low Peak", or Gould-Shawmut Class RK1 "Amp-Trap."
- G. Coordination and current limitations or the protection of each part of the electrical system must be designed around the type and class and manufacturer selected for that type and class.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Mount grouped switches, disconnects and controls on backboards or unistrut. Provide labels on or in all fusible equipment indicating the type and size replacement fuse required.
- B. Generally, mount switches and disconnects between 4' and 5' up, readily accessible.

3.02 FUSES:

- A. Install all fuses as required where indicated on the drawings and where required by the National Electrical Code, special attention shall be given to air conditioning equipment.
- B. Provide 10% spares (minimum of three) of each size and type of fuses furnished. Spare fuses shall be placed in a wall mounted cabinet equal to: Bussmann SFC which shall be located in the switchgear room.

END OF SECTION

SECTION – 16190 (ES) ELECTRICAL SUPPORTING DEVICES

PART 1 - GENERAL

This Section includes basic materials and methods for all of Division 16.

1.01 SELECTION OF PRODUCTS:

- A. Devices, including anchors, fasteners, hangers and supports, shall be of a type designed or fabricated for the purpose, and shall adequately and safely secure the material and equipment and present a neat appearance.
- B. Make job fabricated hangers or supports from standard structural shapes and hardware.
- C. All bolts, screws, nuts and other threaded devices shall have U.S. Standard threads and heads as appropriate.
- D. Select devices using the following criteria:

1. Amount & Type of Load:

The weight of hangers or supports and of enclosed materials is part of the load. Devices shall be suitable for shear, straight pull, vibration, impact or external load as applicable.

2. Safe Working Load:

Determinations of safe working load of devices or job fabricated support assemblies shall be obtained from the published load data of the manufacturer.

3. Atmosphere:

Use devices with corrosion resistant characteristics for the atmospheric conditions in which they are installed. Steel hangers and supports protected by zinc (galvanized) may be used to support aluminum conduit in dry locations only. In damp or wet locations, insulate the aluminum and galvanized steel from each other with aluminum pigmented asphaltum or vinyl paint or insulating tape.

PART 2 - PRODUCTS

2.01 HANGERS AND SUPPORTS:

A. Use equipment as manufactured by:

ELECTRICAL SUPPORTING DEVICES

16190 (ES)-1

Unistrut Steel City - Kindorf Powerstrut Harveys - Alstrut

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Install equipment, including switches, controllers, fixtures and transformers such that removal or replacement may be readily accomplished without damage to equipment or fasteners.
- B. Drill holes for devices in accordance with the manufacturer's recommendations, including diameter and depth.
- C. All parts of hanger and support assemblies, including all accessory hardware, shall be of types designed to be used together.
- D. Internal and external threads of parts that are screwed or bolted together shall be of the same material including coatings and the method of applying coatings. For example, if the threads of bolts or rods are hot dipped galvanized, the nuts must also be galvanized. If they are electro-galvanized, the nuts must also be electro-galvanized. All threads shall be fully engaged. All parts so intended shall be made up tight using tools intended for the purpose.
- E. Use Galvanox on all cut, drilled or punched edges.

3.02 FASTENING:

- A. Fasten all materials and equipment with approved devices. Generally, fasteners shall be as follows:
 - 1. Wood:
 - Fasten to wood with screws except nail may be used on wood partitions for outlet boxes and raceways up to 1" diameter.
 - 2. Masonry:
 - Fasten to masonry with threaded metal inserts, metal expansion screws, toggle bolts, powder-actuated fasteners or other approved means.
 - Use backboards for telecommunications terminal boards and for surface mounting grouped electrical equipment. Paint the wall side of the backboards with an asphaltum coating when the walls are constructed of masonry.

3.03 STRAPS & TRAPEZES:

A. Use manufactured straps or clamps for single small conduit runs. Use trapezes of unistrut and threaded rods for multiple conduit runs and single runs of 1-1/4" or larger.

ELECTRICAL SUPPORTING DEVICES

16190 (ES)-2

SISTRUNK PARKING LOT 12

PROJECT 12166

B. All supports shall be independent of other trades. Galvanized tie wire may be used for tieing off individual conduits, but not as their primary means of supports.

END OF SECTION

SECTION – 16401 (ES) ELECTRICAL SERVICE SYSTEM

PART 1 - GENERAL

1.01 SCOPE OF WORK:

This Section includes the work in the main transformer pad, metering, primary service duct banks.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

Basic Materials & Methods Concrete

1.03 <u>REQUIREMENTS:</u>

All work directly related to the service system shall be in accordance with Florida Power & Light Co. requirements; NFPA 70, Article 450; and as indicated.

1.04 UTILITY COMPANY WORK:

The following work will be performed by Florida Power & Light Co. (FPLC):

- A. Provide conduit from the points located outside building lines to FPLC facilities. Provide primary cable from FPLC facilities to the F.P.L. transformers. Provide potheads to terminate primary cables.
- B. Provide ground wires and ground rods in sleeves and boxes provided by the contractor. Connect customers facilities to FPLC facilities in the vaults and pads including racking all cables in vaults.
- C. Provide meter wiring between plant meter cabinets and current transformers. Plant C.T.'s will be in the main vault/pad. Provide transformers and primary switches in the vault/pad.

PART 2 - EXECUTION

2.01 INSTALLATION:

- A. Provide a I-1/4" rigid steel conduit between plant meter can and the vault/pad and terminate it with a threaded bushing.
- B. Provide conduit sleeves in the floor of the vault/pad for ground rods to be installed by Florida Power and Light Company.

- C. Ductbank Service duct lines shall be individual conduits of rigid steel conduit or PVC, and shall be concrete encased. Slope ducts downward toward manholes and away from the building with a pitch of not less than 3" per 100'. Terminate conduits with end bells. Use approved conduit separators. Use minimum 36" radius bends. Clean each duct line with a 12" test mandril with a diameter 1/4" less than the conduit size; after which, clean the conduit with a stiff bristled brush to clear all earth and gravel particles; and install conduit plugs immediately.
- D. Provide pulling eyes opposite the duct entrances indicated with a minimum pull rating of 2500 lbs.
- E. Provide meter can for the plant demand meter with 1-1/4" conduits to the current transformer locations.
- F. Provide empty conduits from the vault/pad to the points indicated. The utility company will provide the ducts and encasement beyond these points to their facilities. Maintain 36" of cover except as indicated. Seal around all conduits entering the main vaults and transformer rooms. No concrete shall be poured encasing ducts to be used by the utility company until the placement of conduits has been approved by the utility company.
- G. Provide 15' of cable in the main vaults/pad from all secondary entrances that are not bus stabs. Use rigid steel conduit flush with a threaded bushing or bus stabs, as indicated. Coordinate locations and work with the utility company.

END OF SECTION

SECTION – 16450 (ES) GROUNDING

PART 1 - GENERAL

1.01 SCOPE:

This Section includes basic materials and methods for all of Division 16 and related electrical work.

1.02 <u>APPLICABLE REQUIREMENTS:</u>

NEC Article 250

1.03 RELATED WORK SPECIFIED ELSEWHERE:

Transformers - Section 16460

PART 2-PRODUCTS

2.01 GROUND RODS:

- A. Ground rods shall be a minimum of 5/8" by 10', copperweld.
- B. Grounding accessories shall be as manufactured by Burndy, Erico or Thompson.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. End-to-End fixtures shall be continuously bonded.
- B. Grounding contacts of receptacles and fixture grounds shall be connected to a solidly grounded conduit system or to a system grounding conductor (not the system neutral) by a copper wire not smaller than #12 AWG or shall be grounded in some other approved manner.
- C. Lighting Poles Provide a ground rod driven through or near pole bases and Cadweld to #6TW wire to the top of the rod and extend the wire to a grounding lug in the base and bond to all metal parts. Locate ground rods in adjacent pullboxes for visual inspection. Maximum 2 feet from pole bases.

GROUNDING 16450 (ES) -1

- D. Bond all metal parts. Make equipment and bus connections with suitable lugs or clamps. Cadweld all wire-to-ground rod joints. Cadweld all wire-to-wire joints size #1/0 and over.
- E. Bond all conduits stubbing under switchboards, transformers and similar locations using bonding bushings. Bond each conduit separately.
- F. Provide a bond wire in <u>all flexible</u> metal conduits and connect to the boxes at each end in an approved manner. Bond to fixtures where they occur.
- G. Use PVC for sleeving grounding conductors, except that where sleeves are subject to extreme injury use rigid metal conduit bonded at both ends.
- H. Ground all separately derived sources such as transformers to adjacent cold water pipe or building steel in accordance with NEC.
- I. Provide a #6 TW copper ground to each telecommunications terminal cabinet or board from the cold water pipe or system ground.
- J. Provide bonding conductors in all power and lighting conduits; all clock and program conduits and to all power outlets, fixtures and connections to utilization equipment having electrical connections.
- K. Ground all cast iron covers on concrete pullboxes to the green ground wire with a corrosion resistant stud, lug and nut. Use minimum #8 stranded with a loop minimum 18" long.
- L. Provide Ground Collection Bus (GCB) at the locations shown as a common connection. Connect all local grounds as applicable to these points.
- M. All electric equipment (metallic conduit, motor frames, panelboards boxes, main switchboard shall be bonded together with a green insulated copper grounding conductor sized per NEC (size #12 AWG). This bonding conductor shall be continuous through raceway system from main switch ground bus to panelboard bus and to each branch circuit outlet or switch. Equipment grounding conductors are required throughout project, regardless of whether or not shown on drawing.
- N. Equipment grounding conductors shall terminate on terminal bars, screws, lugs, etc., expressly designed for that purpose. Ground clamps shall be of same material as the metal or water pipe they connect to. Use factory made ground bars/terminations.
- O. Main Grounding Electrode Conductors shall be installed in an, approved raceway and properly bonded if metallic. All driven ground rods shall be copper-clad length of 10 feet long. Provide a grid type system if resistance exceeds NEC 25 ohms maximum.

GROUNDING 16450 (ES) -2

SISTRUNK PARKING LOT 12

PROJECT #

P. Provide ground rod access assemblies equal to Brooks 70 Series or equal; 7" Dia. x 9" deep at each ground rod for inspection purposes where not locked inside pullboxes or manholes.

END OF SECTION

GROUNDING 16450 (ES) -3

SECTION – 16502

SITE LIGHTING

PART 1 - GENERAL

1.01 This section includes all outdoor/exterior lighting.

1.02 <u>SUBMITTALS</u>

Submit Shop Drawings, fixture cuts, photometrics, bases, wind load calculations, compliance.

1.03 <u>COMPLIANCE</u>

Comply with all local codes and lightning ordinances and zoning requirements, wind load requirements, and height requirements.

- A. Site lighting shall be installed as specified on the drawings. No fixture substitution will be accepted by this office. This will enable lighting certification letter to be done by our office.
- B. If any site lighting substitution is made, certification letter and test for lighting shall be signed and sealed by an independent professional engineer.
- C. Fixture/pole assemblies shall conform to Florida Building Code 2007 and 2009 revisions, especially Chapter 1609 HVHZ 1620 Dade County, 146 MPH with 3 second gusts, or Broward County, 140 MPH with 3 second gusts.

PART 2 - PRODUCTS

2.01 See fixture schedule and details on drawings.

PART 3 - EXECUTION

3.01 **GROUNDING**

Ground each pole to a 5/8" x 10 ft. ground rod. Ground all metal components.

3.02 FUSING

Provide fusing for each ungrounded line at the base of each pole; not in the fixture head.

SITE LIGHTING 16502-1

3.03 SURGE PROTECTION

Provide surge protection at each pole connected to the ground rod. UL-1449-3

3.04 Set all bases and poles level.

END OF SECTION

SITE LIGHTING 16502-2

SECTION 16917

ELECTRIC SYSTEMS & CONTROLS

PART 1 - GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE:

Basic Materials & Methods Mechanical Controls Motor Controls

1.02 APPLICABLE REQUIREMENTS:

- Controls provided herein and controls furnished under other sections shall conform to NEMA IC-1.
- B. Controls for equipment utilizing a power source separate from the equipment shall be provided with a disconnect and identified and shall comply with NEC Article 430-113.

1.03 SUBMITTALS:

Submit shop drawings for review consisting of catalog cuts, wiring diagrams, descriptive data, and characteristics indicating the type or series of equipment.

PART 2 - PRODUCTS

2.01 <u>RELAYS:</u>

- A. Relays shall conform to NEMA IC-1 and shall be heavy duty type, U.L. listed, rated at 25 amps, 120 volts and mounted in NEMA 1 enclosures. Grouped units may be in a common enclosure with a plywood backboard.
- B. Relays shall be as manufactured by Potter & Brumfield of the type as follows: Single pole double throw (SPDT) - #PR5AY Double pole double throw (DPDT) - #PR11AY Four pole double throw (4PDT) - #PM17AY

2.02 CONTACTORS:

A. Contactors shall conform to NEMA Standard IC-1. Contactor size and ratings shall be based on tables in Part II of IC-1 for enclosed units. Coils shall be rated 120 volts.

- B. Contactor characteristics of size, number of poles, voltage and current shall be as required or indicated for the load served. Units shall be mounted in an individual NEMA 1 enclosure, except the units indicated shall be in the panelboards.
- C. Contactors shall be electrically operated and mechanically held unless indicated otherwise. Provide a local "open-close" control next to the contactor.
- D. Units shall be as manufactured by Square "D", General Electric, Cutler-Hammer or ASCO. Provide remote control switches with pilot light for each contactor.
- E. Contactors mounted in panelboards shall be completely factory prewired and shall have suitable access door and control wiring and diagram.

PART 3-EXECUTION

3.01 Use #14 stranded copper wiring for all controls unless noted otherwise.

3.02 TIME CLOCKS:

All time clocks shall have spring reserve carryover (10 hours) in event of power failure.

3.03 <u>IRRIGATION:</u>

Provide all conductors, regardless of voltage or insulation shall be run in an approved conduit system. This includes sprinkler control wiring and time clocks. Provide sleeves, 2" minimum, for all zone wiring under slabs, roadway crossings (low voltage zone wiring may be unexposed, attached to irrigation piping - confirm prior to bid through architect).

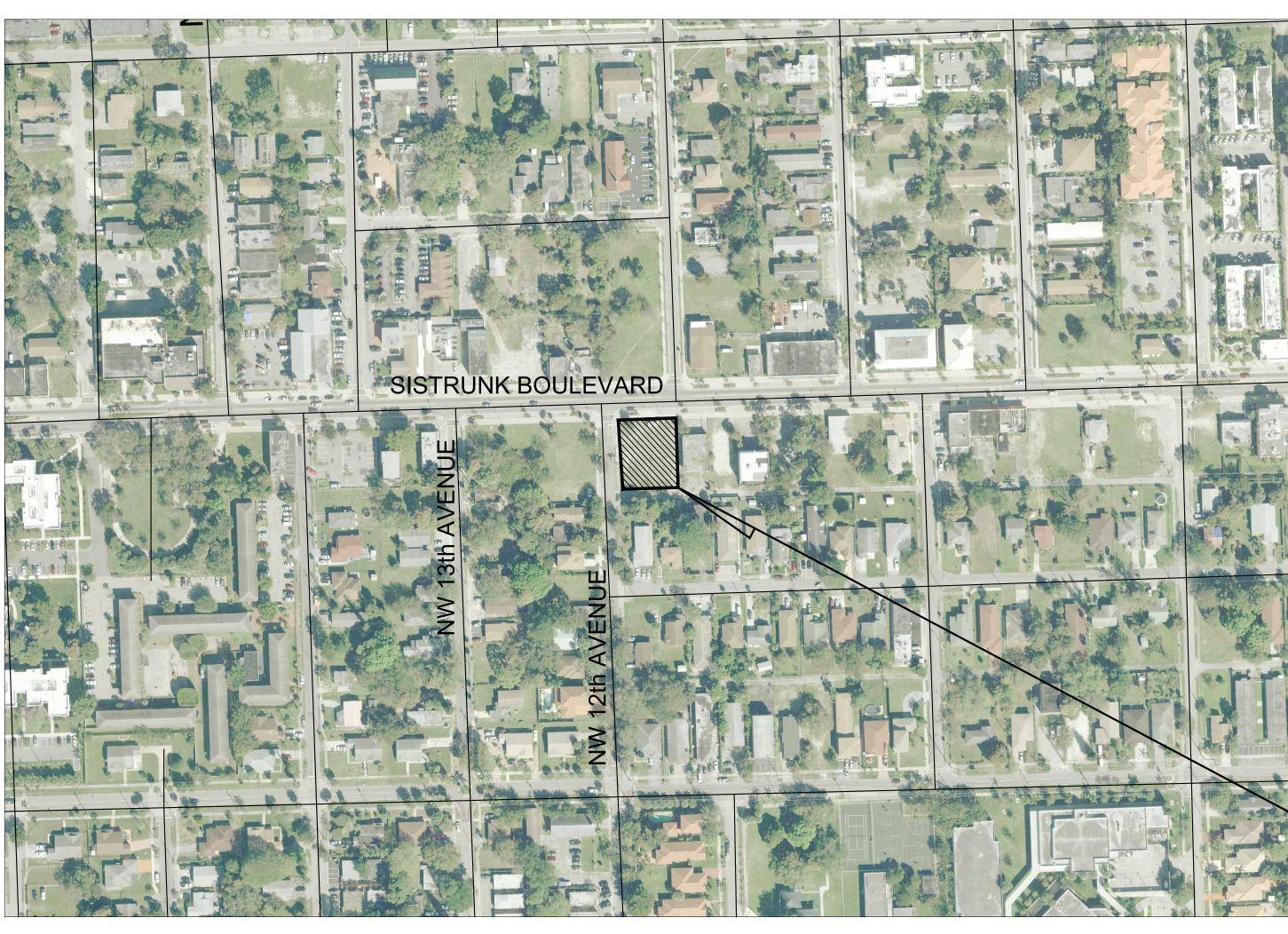
END OF SECTION

NW 12TH AVE & SISTRUNK BLVD PARKING LOT IMPROVEMENTS FOR

THE CITY OF FORT LAUDERDALE

LOCATION

SECTION OF NW 12TH AVENUE & SISTRUNK BOULEVARD CITY OF FORT LAUDERDALE, FLORIDA





Sheet List Table Sheet Title Sheet Number **COVER SHEET BOUNDARY & TOPOGRAPHIC SURVEY** SITE PLAN **EASEMENT EXHIBIT** C-101.0 **GENERAL NOTES DEMOLITION PLAN** C-102.1 DEMOLITION NOTES C-103.0 EROSION CONTROL PLAN C-103.1 **EROSION CONTROL DETAILS** C-201.0 PAVING, GRADING, & DRAINAGE PLAN C-201.1 PAVING, GRADING, & DRAINAGE DETAILS PAVING, GRADING, & DRAINAGE DETAILS C-201.2 PAVING, GRADING, & DRAINAGE DETAILS C-201.3 PAVING, GRADING, & DRAINAGE DETAILS C-201.4 C-201.5 TYPICAL CROSS SECTIONS C-401.0 SIGNING & MARKING PLAN C-501.0 PHOTOMETRICS PLAN C-502.1 LIGHTING DETAILS L-100.0 LANDSCAPE PLAN L-101.0 LANDSCAPE PLAN L-110.0 LANDSCAPE DETAILS

PROJECT LOCATION

L-111.0



PREPARED BY

LANDSCAPE NOTES

PROJECT TEAM

PROJECT MANAGER:

PROJECT LOCATION

Kimley—Horn and Associates, Inc. 600 North Pine Island Road, Suite 450 Ft. Lauderdale, FL 33324

Phone: (954) 535-5128 Fax: (561) 863-8175 Contact: Érin Emmons, GISP

LANDSCAPE ARCHITECT:

Kimley—Horn and Associates, Inc. 1920 Wekiva Way, Suite 200 West Palm Beach, FL 33411 Phone: (561) 840-0233 Contact: Jonathan Haigh, PLA, ASLA

CLIENT:

Suite 450

CIVIL ENGINEER:

Kimley—Horn and Associates, Inc.

600 North Pine Island Road,

Contact: Stefano F. Viola, P.E.

Ft. Lauderdale, FL 33324

Phone: (954) 535-5100

Fax: (561) 863-8175

City of Fort Lauderdale Transportation and Mobility Mr. Frank G. Castro III Parking Services Manager 290 NE 3rd Avenue Fort Lauderdale, FL 33301 Phone: (954) 828-3792 Fax: (954) 828-3704

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA

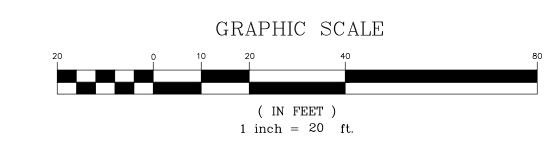


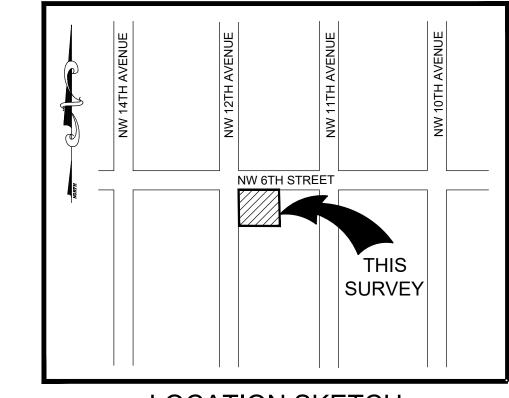


SCALE 1" = 150'

CITY COMMISSION

JOHN P. SEILER, MAYOR BRUCE G. ROBERTS, COMMISSIONER - DISTRICT 1 DEAN J. TRANTALIS, VICE MAYOR/COMMISSIONER - DISTRICT 2 ROBERT L. McKINZIE - COMMISSIONER - DISTRICT 3 ROMNEY ROGERS, COMMISSIONER - DISTRICT 4





LOCATION SKETCH

NOT TO SCALE

BEGIN AT THE SOUTHEAST CORNER OF SAID LOT 9; THENCE NORTH 00'04'10" EAST ON THE EAST LINE OF SAID LOT 9 FOR 127.49 FEET TO THE INTERSECTION WITH A LINE 35.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF THE SOUTHEAST 1/4 OF SECTION 4, TOWNSHIP 50 SOUTH, RANGE 42 EAST, SAID PARALLEL LINE ALSO BEING THE SOUTH RIGHT-OF-WAY LINE OF NORTHWEST 6TH STREET; THENCE NORTH 89'41'48" WEST ON SAID PARALLEL LINE AND ON SAID SOUTH RIGHT-OF-WAY LINE 84.92 FEET TO A POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHEASTERLY; THENCE SOUTHWESTERLY ON THE ARC OF SAID CURVE, WITH A RADIUS OF 20.00 FEET AND A CENTRAL ANGLE OF 90'14'02", AN ARC DISTANCE OF 31.50 FEET TO THE INTERSECTION WITH A RADIAL LINE; THENCE NORTH 89°55'50" WEST ON SAID RADIAL LINE 5.00 FEET TO THE INTERSECTION WITH THE WEST LINE OF SAID LOT 10; THENCE SOUTH 00°04'10" WEST ON SAID WEST UNE 107.61 FEET TO THE SOUTHWEST CORNER OF SAID LOT 10; THENCE SOUTH 89°48'40" EAST ON SAID SOUTH LINE AND ON THE SOUTH LINE OF SAID LOT 9 FOR 110.00 FEET TO THE POINT OF BEGINNING. CONTAINING 13,849 SQUARE FEET, 0.3179 ACRES.

- 3. IT IS A VIOLATION OF THE STANDARDS OF PRACTICE RULE 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE TO ALTER THIS SURVEY WITHOUT THE EXPRESS PRIOR WRITTEN CONSENT OF THE SURVEYOR. ADDITIONS AND/OR DELETIONS MADE TO THE FACE OF THIS SURVEY WILL MAKE THIS SURVEY INVALID.
- 4. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY, EASEMENTS, OWNERSHIP, OR OTHER INSTRUMENTS OF RECORD.
- 5. OTHER THAN AS SHOWN, THERE IS NO EVIDENCE THAT UNDERGROUND ENCROACHMENTS EXIST. HOWEVER, A SUBSURFACE
- 6. THIS SURVEY DOES NOT IDENTIFY THE LIMITS OR EXTENTS OF POTENTIAL JURISDICTIONAL BOUNDARIES.
- 7. BEARINGS SHOWN HEREON ARE BASED ON AN ASSUMED MERIDIAN ALONG THE EAST LINE OF LOT 9, BLOCK 3, OF TUSKEGEE PARK
- 8. THIS SURVEY IS CLASSIFIED AS COMMERCIAL/HIGH RISK AND EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED BY THE STANDARDS OF PRACTICE RULE 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE. THE ACCURACY
- 9. THE OWNERSHIP OF FENCES, PERIMETER WALLS AND/OR HEDGES SHOWN HEREON ARE NOT KNOWN AND THUS ARE NOT LISTED AS
- 10. ELEVATIONS SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929). SAID ELEVATIONS ARE BASED ON NATIONAL GEODETIC SURVEY BENCHMARKS "S 235", A BRASS DISK LYING 74 FEET NORTHEAST OF THE NORTHEAST CORNER OF THE FORT LAUDERDALE PUBLIC LIBRARY, 30 FEET WEST OF THE CENTERLINE OF NE 14TH AVENUE AND 24 FEET SOUTH OF THE EXTENDED CURB OF SUNRISE BOULEVARD. ELEVATION = 5.88' AND BENCHMARK "P 235" A BRASS DISK LYING 77 FEET NORTH OF THE CENTERLINE OF SUNRISE BOULEVARD, 26 FEET SOUTHEAST OF THE CENTERLINE OF NE 5TH TERRACE AND 2.9 FEET
- ADJUSTMENT APPLIED (83/NSRS11), TRANSVERSE MERCATOR, FLORIDA EAST ZONE.
- 12. THE EXPECTED VERTICAL ACCURACY OF THE INFORMATION SHOWN HEREON IS ± 0.03 ' FOR HARD SURFACE ELEVATIONS AND 0.1' FOR SOFT SURFACE ELEVATIONS.
- 14. THE INTENDED DISPLAY SCALE FOR THIS SURVEY IS 1"= 20' OR SMALLER.
- 15. ALL MAPPED FEATURES AND ELEVATIONS SHOWN HEREON WERE OBTAINED BY KEITH AND ASSOCIATES FOR THE PURPOSE OF THIS

CERTIFICATION:

I HEREBY CERTIFY THAT THE ATTACHED BOUNDARY AND TOPOGRAPHIC SURVEY OF THE HEREON DESCRIBED PROPERTY IS DEPICTED TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THE INFORMATION AS SURVEYED UNDER MY DIRECTION ON MAY 16, 2016 MEETS THE STANDARDS OF PRACTICE RULE 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, SUBJECT TO THE

KEITH & ASSOCIATES, INC. CONSULTING ENGINEERS

LEE POWERS PROFESSIONAL SURVEYOR AND MAPPER REGISTRATION No. 6805

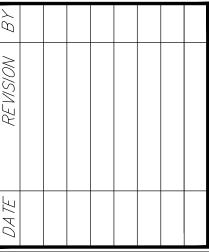
LEGAL DESCRIPTION:

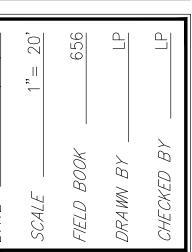
SURVEY NOTES:

- 1. THE LAND DESCRIPTION SHOWN HEREON WAS PROVIDED BY THE CLIENT.
- 2. NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR AN ENCRYPTED DIGITAL SIGNATURE OF A FLORIDA PROFESSIONAL SURVEYOR AND MAPPER.
- INVESTIGATION WAS NOT PERFORMED TO DETERMINE IF UNDERGROUND ENCROACHMENTS DO EXIST.
- BEING NORTH 00°04'10" EAST.
- OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
- ENCROACHMENTS. FENCES, HEDGES AND/OR PERIMETER WALLS ARE SHOWN IN THEIR RELATIVE POSITION TO THE BOUNDARY.
- WEST OF THE WEST CORNER OF A BATTERY WELL FOR SIGNAL. ELEVATION = 7.61'.
- 11. FEATURES AND LINE WORK SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN HORIZONTAL DATUM OF 1983 WITH THE 2011
- 13. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATION IS TO THE CENTER OF THE SYMBOL AND MAY BE ALTERED FOR CLARITY. DISTANCES AND ELEVATIONS SHOWN HEREON ARE U.S. SURVEY FEET UNLESS OTHERWISE NOTED. THE EXPECTED HORIZONTAL ACCURACY OF THE INFORMATION SHOWN HEREON IS ± 0.1 '.
- SURVEY.

QUALIFICATIONS NOTED HEREON.

STATE OF FLORIDA







SHEET 1 *OF* 1 PROJECT NUMBER 09210.01

— CURB INLET RIM ELEV.=6.21'

RIM ELEV.=6.29'_

BOTTOM ELEV.=(-)1.23

FOUND IRON PIPE W/ CAP

CONCRETE LIGHT POLE

CONCRETE UTILITY POLE

DECORATIVE LIGHT POLE

ELECTRIC HAND HOLE

ELECTRIC MANHOLE

ELECTRIC METER

ELECTRIC OUTLET

HANDICAP PARKING

METAL UTILITY POLE

STORM DRAIN MANHOLE

FIRE DEPARTMENT CONNECTION

METAL LIGHT POLE

IRRIGATION CONTROL VALVE

TRAFFIC DIRECTION ARROWS

GUY ANCHOR

FLOOD LIGHT

METAL POST

PALM TREE

CURB INLET

SHADE TREE

SINGLE POST SIGN

POST

BUILDING COLUMN

ELECTRICAL BOX

-

N. INV. ELEV.=1,24' 12" RCP NW 6TH STREET

FOUND IRON

ຸ S89⁺48′40″E ∫

____ x ____ Gate

్లు 110.00'

____ x ____

SANITARY SEWER CLEANOUT

SANITARY SEWER MANHOLE

TRAFFIC SIGNAL CABINET

CROSS WALK LIGHT POLE

BACK FLOW PREVENTER

TRAFFIC SIGNAL HANDHOLE

SANITARY SEWER VALVE

TRAFFIC SIGNAL BOX

WOOD UTILITY POLE

FIRE HYDRANT

WATER VALVE

WATER METER

YARD DRAIN

- x - x - CHAIN LINK FENCE

-O----- METAL HAND RAIL

-----OHW------ OVERHEAD LINES

WOOD FENCE

. SHRUB LINE

UNKNOWN VALVE

WOOD LIGHT POLE

VAULT

♦

L=31.50' R=20.00'

RIM ELEV.=6.38'

RIM ELEV.=6.52'

SITE BENCHMARK-

RIM ELEV.=6.82' E. INV. ELEV.=1.26' 10" CLAY S. INV. ELEV.=1.25' 10" CLAY

NW. INV. ELEV.=1.49' 8" CLAY

LEGEND:

CATV

CMP

CONC.

EHH

ELEV.

0.R.B.

R/W

TSB

TSHH TYP.

BSTSC

CURVE CENTRAL ANGLE BROWARD COUNTY RECORDS

CORRUGATED METAL PIPE

IRRIGATION CONTROL VALVE

OFFICIAL RECORDS BOOK

REINFORCED CONCRETE PIPE

POLYVINYL CHLORIDE PIPE

TRAFFIC SIGNAL CABINET

FIBER OPTIC HAND HOLE

TELEPHONE HAND HOLE

TELEPHONE MANHOLE

TELEPHONE CABINET

CABLE TELEVISION

CATCH BASIN

TRAFFIC SIGNAL HAND HOLE

TRAFFIC SIGNAL BOX

FLORIDA LICENSED BUSINESS NUMBER

ELECTRIC HAND HOLE

BUILDING

BENCHMARK

CATCH BASIN

CLEAN OUT

CONCRETE

ELEVATION

ARC LENTH

RIGHT OF WAY

PLAT BOOK

TYPICAL WITH

BENCH

WOOD POST

BENCHMARK

BOLLARD

INVERT

CABLE TELEVISION

S. INV. ELEV.=2.73' 12" RCP

STORM MANHOLE -RIM ELEV.=6.56'

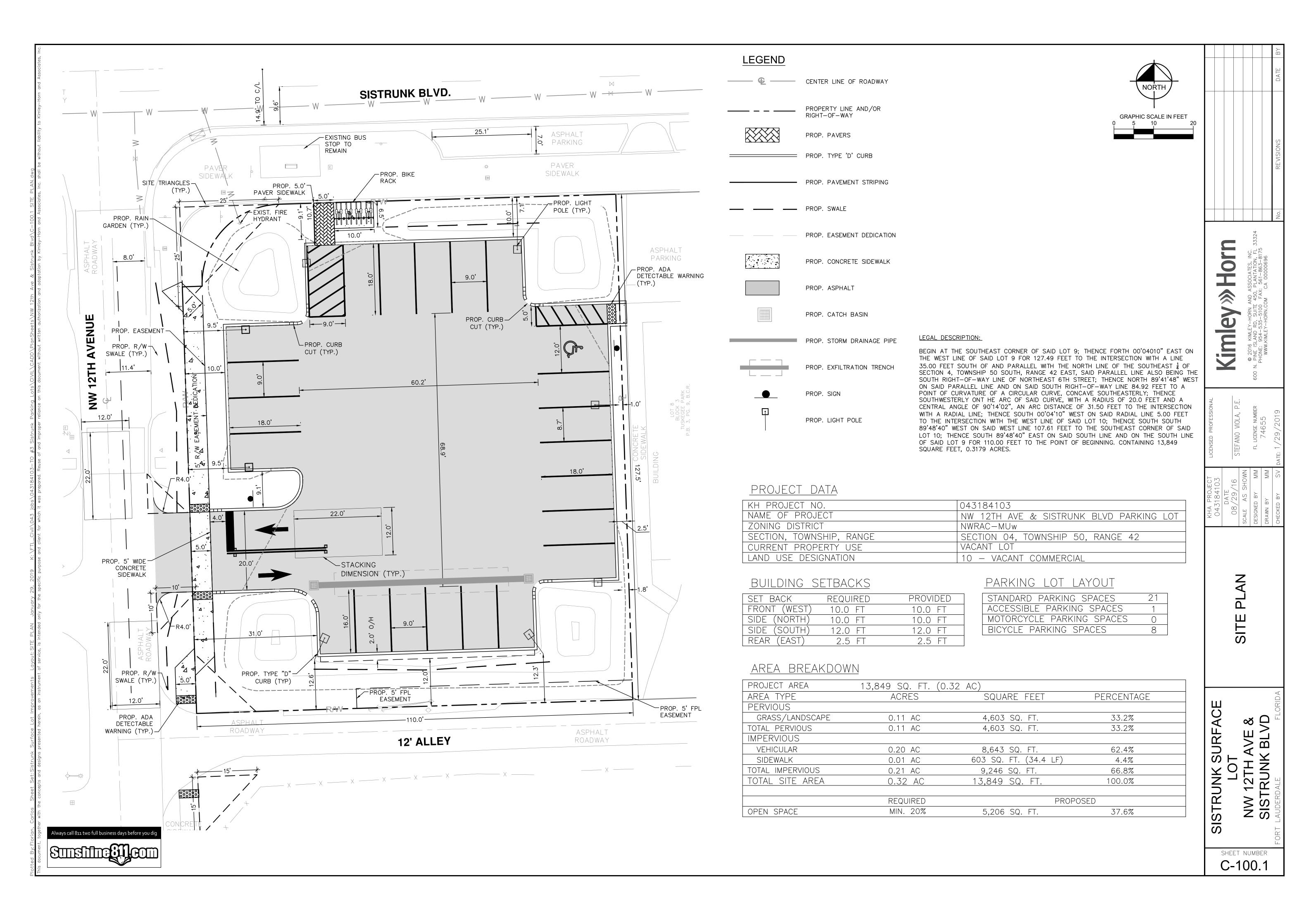
STORM MANHOLE -

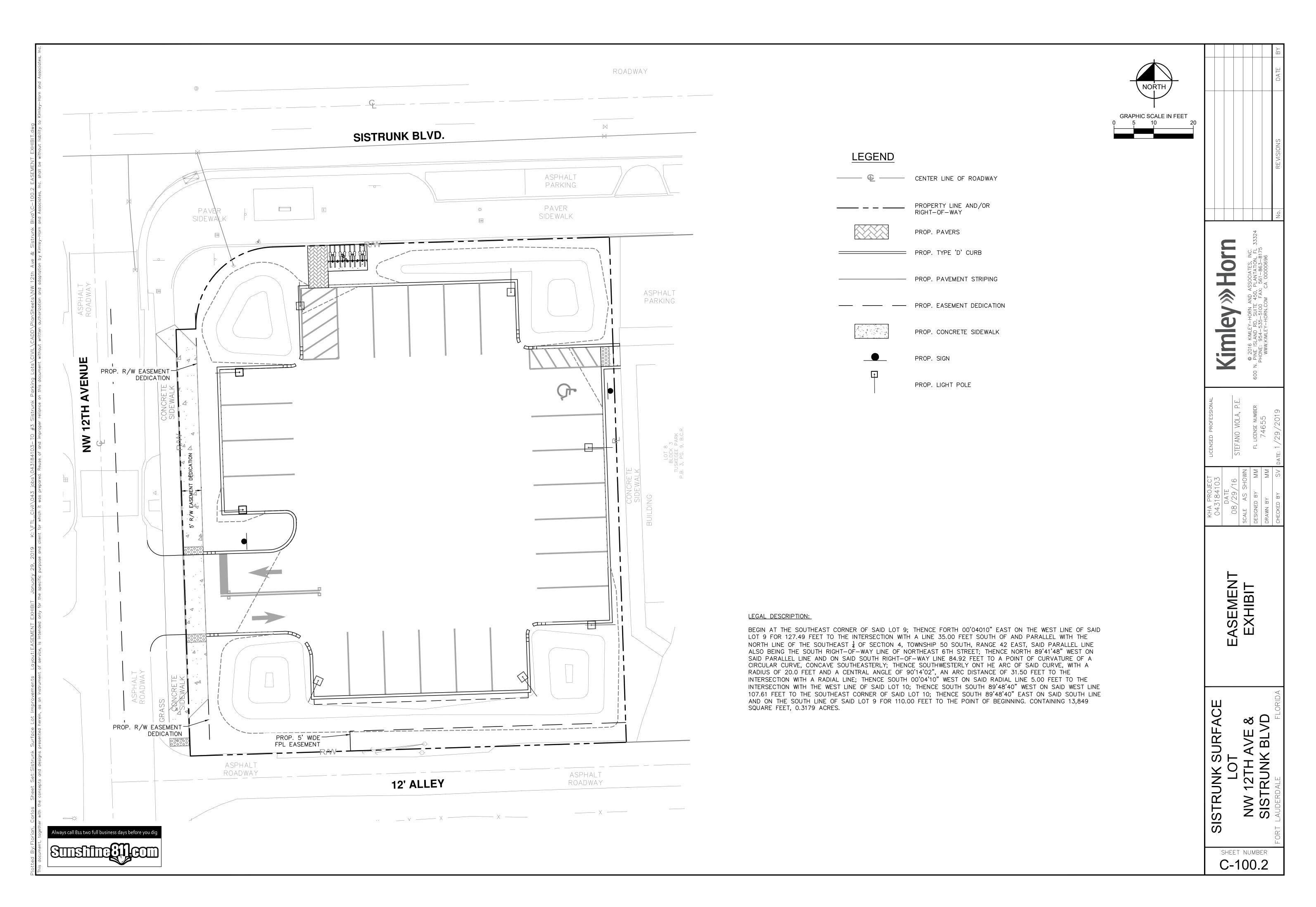
SANITARY MANHOLE RIM ELEV.=6.85'

SET MAG NAIL W/ FOUND IRON -DISK "LB 6860" PIPE W/ CAP

SITE BENCHMARK -

DISK "LB 6860" ELEV.=7.41'





GENERAL CONSTRUCTION NOTES

- 1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE CITY OF FORT LAUDERDALE, FLORIDA PUBLIC WORKS MANUAL, AND SPECIFICATIONS, THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION), THE FLORIDA BUILDING CODE, AND ALL OTHER LOCAL, COUNTY, STATE, AND FEDERAL STANDARDS GOVERNING THE PROPOSED WORK AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.
- 3. THE INFORMATION PROVIDED IN THESE PLANS IS TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY INVESTIGATION THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITION THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE BOTH THE SURFACE AND SUBSURFACE CONDITIONS AND BASE HIS PRICING ACCORDINGLY. GEOTECHNICAL AND ENVIRONMENTAL REPORTS ARE AVAILABLE FOR REVIEW.
- 4. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
- 5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROXIMATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.
- 6. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER, AND THE ENGINEER OF RECORD.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
- 8. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
- 9. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
- 10. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER AND DESIGN ENGINEER OF RECORD DIRECTLY FROM THE TESTING AGENCY.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTORS RESPONSIBILITY.
- 12. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE OWNER, ENGINEER OF RECORD AND APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.
- 13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE MAINTENANCE OF TRAFFIC FOR THE ADJACENT PROPERTY DURING CONSTRUCTION.
- 14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL AFFECTED AND ADJACENT PROPERTY OWNERS PRIOR TO BEGINNING WORK.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PROPOSED IMPROVEMENTS. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
- 16. PRIOR TO GRAND OPENING THE CONTRACTOR SHALL:
- SWEEP THE ENTIRE SITE
- ELIMINATE ALL DEBRIS IN THE LANDSCAPING AREAS PRESSURE CLEAN THE SITE ASPHALT
- PRESSURE CLEAN THE CURBS, SIDEWALKS, CONCRETE, AND PAVERS

SURVEY DATA

- 1. ALL ELEVATIONS ON THE PLANS OR REFERENCED IN THE SPECIFICATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). HORIZONTAL COORDINATES ARE RELATIVE TO THE FLORIDA STATE COORDINATES SYSTEM, EAST ZONE, NORTH AMERICAN DATUM 1983(90) (NAD83).
- 2. ALL EXISTING CONTROL POINTS AND/OR REFERENCE MARKERS SHALL BE RAISED TO FINAL GRADE. THESE POINTS AND REFERENCE MARKERS SHALL BE LOCATED AND NOTED ON THE AS-BUILTS.
- 3. THE LOCATION OF EXISTING RIGHT-OF-WAY LINES, CENTERLINES, ROADWAY PAVEMENT, UTILITIES, TREES, AND OTHER PHYSICAL ABOVE-GROUND FEATURES SHOWN ON THE PLANS WERE TAKEN FROM THE SPECIFIC PURPOSE SURVEYS PREPARED BY:

KEITH & ASSOCIATES, INC. 301 EAST ATLANTIC BOULEVARD POMPANO BEACH, FL 33060 PHONE: 954-788-3400 FAX: 954-788-3500 CONTACT: LEE POWERS, P.S.M.

- 4. ALL STATIONS AND OFFSETS ARE REFERENCED TO BASELINE OF SURVEY/CONSTRUCTION BASELINE.
- 5. EXISTING SECTION CORNERS AND 1/4 SECTION CORNERS, AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE REFERENCED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND REPLACED IF DISTURBED BY THE CONTRACTOR AT DIRECTION OF A REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA.
- 6. ALL MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF IN DANGER OF DAMAGE, NOTIFY:

GEODETIC INFORMATION CENTER ATTN: MARK MAINTENANCE SECTION N/CG-162 6001 EXECUTIVE BLVD ROCKVILLE, MARYLAND 20852 PHONE: 301-443-8319

PAVING GRADING AND DRAINAGE NOTES

- 1. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR FDOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
- 2. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.
- 3. TRAFFIC CONTROL ON ALL FDOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE
- 4. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
- 5. ALL EARTHEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE LANDSCAPE PLAN.
- 6. ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS AS INDICATED ON THE DRAWINGS.
- 7. WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT. THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT ELEVATION WITH THE PROPOSED PAVEMENT UNLESS OTHERWISE INDICATED.
- 8. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE ENGINEER PRIOR TO ANY EXCAVATION.
- 9. STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
- 10. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO FDOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT. THE MOST STRINGENT SHALL GOVERN.
- 11. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE EARTHEN AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING
- 12. ALL CUT OR FILL SLOPES SHALL BE 4 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
- 14. SOD, WHERE CALLED FOR, MUST BE INSTALLED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

- 15. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE ENVIRONMENTAL RESOURCE PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY WATER MANAGEMENT DISTRICT REPRESENTATIVES.
- 16. THE CONTRACTOR SHALL ENSURE THAT PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.
- 17. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

MAINTENANCE

City of Fort Lauderdale

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

- 1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
- 2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO SECTION 981 OF THE STANDARD SPECIFICATIONS.
- 3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
- 4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
- 5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
- 6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS AT NO ADDITIONAL COST TO THE OWNER WHEN THE DESIGN CAPACITY HAS BEEN NOTICEABLY REDUCED IN THE OPINION OF THE
- 7. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

MAINTENANCE OF TRAFFIC

- 1. TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE 2015 EDITION OF THE FDOT DESIGN STANDARDS (600 SERIES), AND THE 2009 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS A MINIMUM CRITERIA.
- 2. IF ANY DROP-OFF CONDITION CAN NOT BE CREATED AND RESTORED WITHIN THE SAME WORK PERIOD, THE CONTRACTOR SHALL USE BARRIERS PER INDEX 600 OF THE FDOT DESIGN STANDARDS.
- 3. THE CONTRACTOR SHALL HAVE A TRAFFIC CONTROL OFFICER ON SITE DURING WORK ACTIVITIES.
- 4. THE CONTRACTOR SHALL NOTIFY ALL LOCAL POLICE DEPARTMENTS, FIRE DEPARTMENTS, AND EMS 48 HOURS IN ADVANCE OF ANTICIPATED DISRUPTION TO THE NORMAL FLOW OF TRAFFIC, INCLUDING DETOURS.
- 5. THE CONTRACTOR SHALL NOTIFY THE CITY OF FORT LAUDERDALE AND THE BROWARD COUNTY SCHOOL DISTRICT TWO WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- 6. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN FACILITIES PER STANDARD INDEX 660 DURING ALL CONSTRUCTION ACTIVITIES.

TYPICAL ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

- PRE-CONSTRUCTION MEETING
- SUBGRADE PREPARATION
- BASE INSTALLATION
- CONCRETE INSTALLATION - UNDERGROUND PIPING AND UTILITIES INSTALLATION
- INSTALLATION OF STRUCTURES, DDCV, HYDRANTS, METERS, ETC. SIDEWALK INSTALLATION
- CONNECTIONS TO WATER AND SEWER MAINS
- TESTS OF UTILITIES
- ANY OTHER INSPECTION FOR WHICH A PERMITTING AGENCY REQUIRES THE ENGINEER TO BE PRESENT

3RD PARTY TEST REPORTS REQUIRED

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:

- DENSITY TEST REPORTS
- ANY OTHER TESTING REQUIRED BY JURISDICTIONAL AGENCIES

RECORD DRAWINGS

- 1. DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON HIS SET OF CONSTRUCTION DRAWINGS THE EXACT LOCATION, LENGTH AND ELEVATION OF ANY FACILITY NOT BUILT EXACTLY ACCORDING TO PLANS.
- 2. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILT GRADES AND LOCATIONS OF FINISHED PAVEMENT, SIDEWALKS, CURBS, AND ALL PHYSICAL IMPROVEMENTS. SUCH GRADES SHALL BE OBTAINED BY A LICENSED SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF FLORIDA, AND SHALL DOCUMENT THE INTENT OF THE PROPOSED GRADES SHOWN ON THE PLANS. THIS SHALL BE DONE AT NO COST TO THE OWNER.

PROJECT CLOSE OUT

- 1. CLEANING UP
- A. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEANUP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEPT CLEAN.
- B. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS/HER WORK, EQUIPMENT AND/OR EMPLOYEES TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS.
- C. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, FENCES, MAILBOXES, SIGNS AND ANY OTHER IMPROVEMENTS REMOVED DURING CONSTRUCTION WITH THE SAME TYPE OF MATERIAL AND TO THE CONDITION WHICH EXISTED PRIOR TO THE BEGINNING OF OPERATIONS.
- D. WHERE MATERIAL OR DEBRIS HAVE WASHED OR FLOWED INTO, OR HAVE BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK. THESE AREAS SHALL BE KEPT IN A CLEAN AND NEAT CONDITION.
- E. ALL DISPOSAL OF EXCESS AND UNSUITABLE EXCAVATED MATERIAL, DEMOLITION VEGETATION, RUBBISH AND DEBRIS SHALL BE MADE OUTSIDE THE LIMITS OF CONSTRUCTION AT A LEGAL DISPOSAL SITE PROVIDED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE, WITH THE PRIOR APPROVAL OF THE ENVIRONMENTAL ENGINEER. MATERIAL CLEARED FROM THE SITE SHALL NOT BE DEPOSITED ON ADJACENT AND/OR NEARBY PROPERTY.
- F. IMMEDIATELY PRIOR TO GRAND OPENING, CONTRACTOR IS TO SWEEP ENTIRE SITE, ELIMINATE ALL DEBRIS AND FUMIGATE THE LANDSCAPE AREAS AND PRESSURE CLEAN THE SITE ASPHALT, CURB, SIDEWALKS, AND CONCRETE
- 2. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- 3. CONTRACTOR TO REPLACE ALL FOUND PIPES WITH NAIL AND DISKS.
- 4. REFER TO BROWARD COUNTY AND THE CITY OF FORT LAUDERDALE STANDARDS FOR ADDITIONAL CLOSE-OUT REQUIREMENTS.

SHOP DRAWINGS

PRIOR TO FABRICATION OR CONSTRUCTION, SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD FOR REVIEW OF THE FOLLOWING ITEMS:

- DRAINAGE:
- A. DRAINAGE INLETS, CATCH BASINS, MANHOLES AND STRUCTURES, INCLUDING TOP/BOTTOM SLABS, FRAMES, GRATES, RIMS AND POLLUTANT RETARDANT BAFFLES B. TRENCH OR SLOT DRAINS INCLUDING CHANNELS, ANCHORS, GRATES, OUTLETS, ETC. C. DRAINAGE WELL STRUCTURES, CASING AND GRATES D. DRAINAGE PIPE AND FITTINGS
- E. CLEANOUTS F. EXFILTRATION TRENCH FILTER FABRIC
- 2. WATER DISTRIBUTION
- A. PIPE AND FITTINGS B. VALVES AND AIR RELEASE VALVES C. FIRE HYDRANTS
- D. FDC'S E. BACKFLOW PREVENTION DEVICES

D. VALVES AND AIR RELEASE VALVES

F. METER VAULTS

G. TAPPING SLEEVES AND CORPORATION STOPS

3. SANITARY SEWER:

A. MANHOLES, INCLUDING STRUCTURES, TOP/BOTTOM SLABS, FRAMES AND RIMS B. PIPE AND FITTINGS C. CLEANOUTS

- E. PUMP STATION AND ALL RELATED EQUIPMENT 4. <u>ASPHALT MIX</u>
- A. SUBGRADE AND LIMEROCK BASE SECTIONS TO BE INCLUDED

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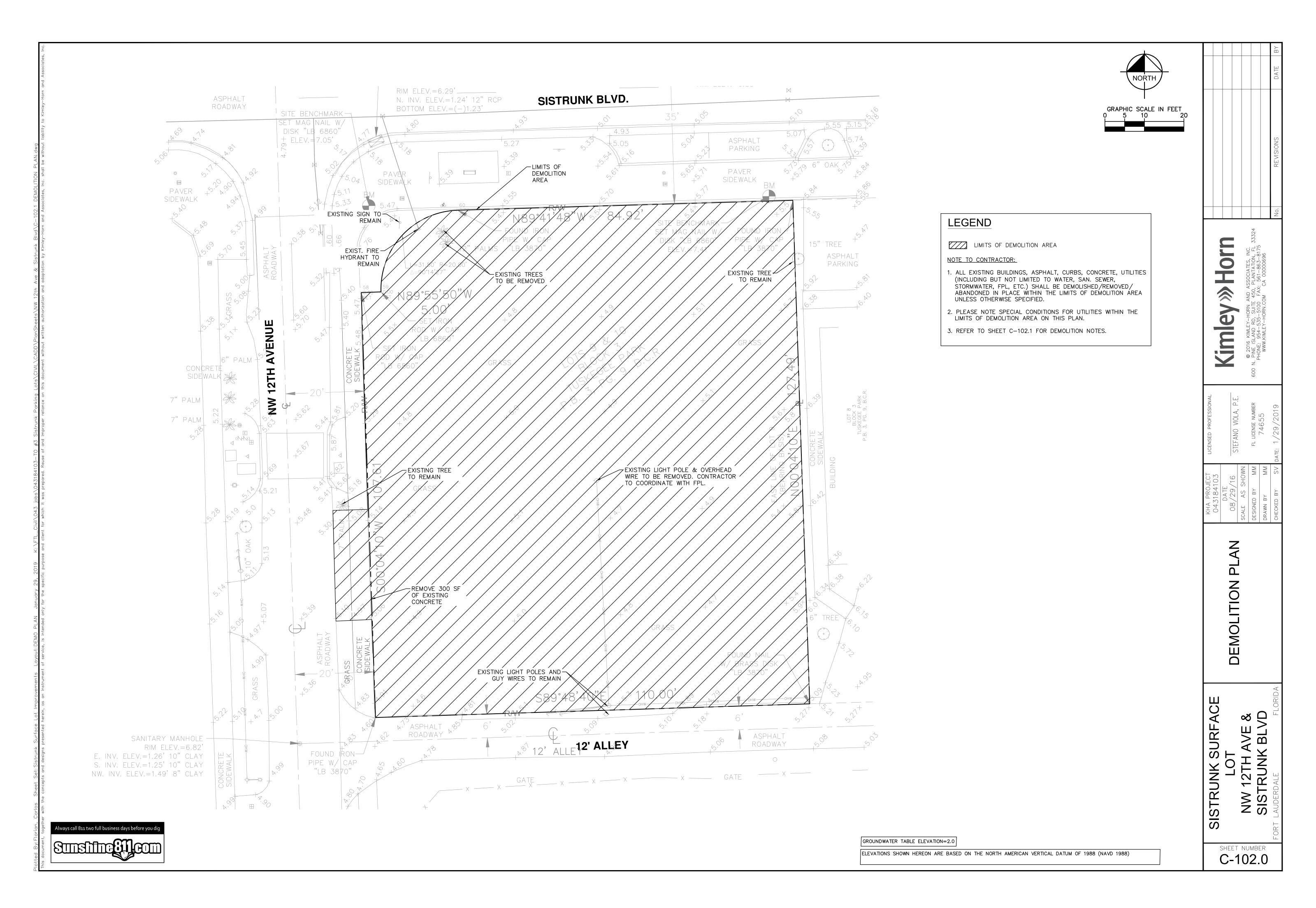


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Page 385 of 409

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Exhibit 1 p. 385



DEMOLITION NOTES AND SPECIFICATIONS:

SHOULD ANY SECTION OF THESE DEMOLITION NOTES BE IN DIRECT CONFLICT WITH THE PROVISIONS OR TECHNICAL SPECIFICATIONS CONTAINED IN THE CONTRACT DOCUMENT FOR THIS PROJECT, THE INTENT OF THE CONTRACT DOCUMENT SHALL GOVERN

I. GENERAL

FOR THIS PROJECT, "OWNER" SHALL MEAN CITY OF FORT LAUDERDALE, "SURVEY" SHALL MEAN THE BOUNDARY SURVEY PREPARED BY KEITH & ASSOCIATES, INC. ON 09/20/2016 AND "ENGINEER" SHALL MEAN THE ENGINEER OF RECORD.

- 1. EXISTING CONDITIONS, UTILITIES, STRUCTURES AND OTHER IMPROVEMENTS, AS SHOWN ON THE DEMOLITION DRAWINGS, WERE TAKEN FROM THE SURVEY, AND FROM INFORMATION PROVIDED BY UTILITY COMPANIES. AN ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING STRUCTURES, UTILITIES, DRIVES, WALKS, ETC., IN THEIR APPROXIMATE LOCATION. OTHERS MAY EXIST AND MAY BE FOUND UPON VISITING THE SITE. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE ALL FACILITIES AND TO DETERMINE THEIR EXTENT. IF SUCH FACILITIES OBSTRUCT THE PROGRESS OF THE WORK AND ARE NOT INDICATED TO BE REMOVED OR RELOCATED, THEY SHALL BE REMOVED OR RELOCATED ONLY AS DIRECTED BY THE OWNER, ARCHITECT, OR ENGINEER OF RECORD, AT NO ADDITIONAL COST TO THE OWNER.
- 2. SOME ITEMS TO BE REMOVED MAY NOT BE DEPICTED ON THE TOPOGRAPHIC SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE FULL EXTENT OF ITEMS TO BE REMOVED. IF ANY ITEMS ARE IN QUESTION, THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL OF SAID ITEMS.
- 3. ORGANIZE AND PERFORM DEMOLITION WORK TO AVOID DAMAGE TO CONSTRUCTION INTENDED TO REMAIN, INCLUDING TREES (SEE LANDSCAPE PLANS FOR DETAILS).
- 4. DEMOLITION AND REMOVAL OPERATIONS SHALL BE CONDUCTED IN AN EXPEDIENT MANNER, WITH PRECAUTIONS TAKEN TO PREVENT THE DEMOLITION SITE FROM BEING A NUISANCE.
- 5. PERFORM REMOVAL AND DEMOLITION IN ACCORDANCE WITH DEMOLITION PLANS AND TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING ADJACENT BUILDINGS, FURNISHINGS, AND EQUIPMENT. NOTIFY THE ENGINEER OF ANY CONDITIONS THAT MAY AFFECT THE SAFETY OF OCCUPANTS OF ADJACENT BUILDINGS, THE NORMAL USE OF THESE FACILITIES, OR THE PHYSICAL CONDITION OF THE STRUCTURES.
- 6. ALL EXISTING UTILITIES OUTSIDE THE PROPERTY BOUNDARIES ARE TO REMAIN, UNLESS OTHERWISE NOTED.
- 7. PRIOR TO DEMOLITION ACTIVITIES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL AFFECTED UTILITY COMPANIES IN ORDER TO COORDINATE THE DEACTIVATION OF ALL EXISTING UTILITY LINES WITHIN THE PROPERTY.
- 8. THE CONTRACTOR SHALL USE EXTREME CAUTION IN REMOVING ANY STRUCTURES AND UTILITIES ABOVE AND BELOW GRADE TO PREVENT DAMAGE TO EXISTING UTILITIES WHICH ARE TO REMAIN IN SERVICE. ANY DAMAGE TO EXISTING PIPELINES, UTILITIES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, IN A MANNER ACCEPTABLE TO THE PARTY IN OWNERSHIP OF THE DAMAGED PROPERTY. THE CONTRACTOR SHALL REPORT ANY EXISTING DAMAGE PRIOR TO BEGINNING WORK. IN THE EVENT OF ACCIDENTAL DISRUPTION OF UTILITIES OR THE DISCOVERY OF PREVIOUSLY UNKNOWN UTILITIES, STOP WORK IMMEDIATELY AND NOTIFY THE AFFECTED UTILITY COMPANY AND THE ENGINEER. DO NOT CONTINUE WORK UNTIL THE UTILITY COMPANY, ENGINEER, AND CONTRACTOR AGREE ON A PLAN TO CORRECT THE SITUATION OR IDENTIFY THE UTILITY SERVICE LINE.
- 9. EXISTING WORK NOT SPECIFIED FOR REMOVAL WHICH IS TEMPORARILY REMOVED, DAMAGED, EXPOSED, OR IN ANY WAY DISTURBED OR ALTERED BY THE CONTRACTORS ACTIVITIES SHALL BE REPAIRED, PATCHED OR REPLACED, SOLELY AT THE CONTRACTOR'S EXPENSE, TO THE ENGINEER'S AND OWNER'S SATISFACTION.
- 10. TITLE AND RESPONSIBILITY TO MATERIALS AND EQUIPMENT TO BE REMOVED, EXCEPT SALVAGEABLE EQUIPMENT TO BE RETAINED BY THE OWNER, IS VESTED TO THE CONTRACTOR UPON RECEIPT OF NOTICE TO PROCEED. THE OWNER WILL NOT BE RESPONSIBLE FOR THE CONDITION, LOSS OR DAMAGE TO SUCH MATERIALS AND EQUIPMENT AFTER THE ISSUANCE OF THE NOTICE TO PROCEED.
- 11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO:

 A. PROTECT ALL EXISTING STRUCTURAL AND VEGETATIVE ELEMENTS TO

REMAIN DURING DEMOLITION UNLESS OTHERWISE SPECIFIED.

- B. IF APPLICABLE, PATCH AND REPAIR ALL SURFACES WITHIN THE PUBLIC R/W AFFECTED BY DEMOLITION
- C. SAW-CUT IN NEAT, STRAIGHT LINES, EXISTING CONC. OR ASPHALT PAVEMENT.
- D. REMOVE ALL EXISTING IRRIGATION LINES WITHIN THE LIMITS OF DEMOLITION UNLESS OTHERWISE NOTED.
- E. ALL EXISTING CHAIN LINK FENCES AND CBS WALLS ALONG THE PERIMETER OF THE PROPERTY SHALL REMAIN, UNLESS OTHERWISE SPECIFIED.
- F. NO ELECTRIC POLES, STREET LIGHTS, WATER METERS/VALVES, FIRE HYDRANTS ETC. WILL BE REMOVED WITHIN THE ROADWAY RIGHT—OF—WAY, UNLESS OTHERWISE NOTED ON THE DEMOLITION PLANS.
- G. REFER TO LANDSCAPE PLANS FOR VERIFICATION OF ALL EXISTING TREES TO BE REMOVED, RELOCATED OR TO REMAIN.
- H. MAINTAIN ALL EXISTING SURVEY REFERENCES AND MARKERS IN PLACE, OTHERWISE THEY SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

II. DESCRIPTION

- . PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, ETC., NECESSARY AND INCIDENTAL TO THE COMPLETION OF ALL SITE DEMOLITION AND CLEARING WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING THE LEGAL TRANSPORT AND OFF-SITE DISPOSAL OF DEMOLITION DEBRIS.
- 2. ALL SITE WORK INCLUDES , BUT IS NOT LIMITED TO THE FOLLOWING:
 - A. FULL-DEPTH REMOVAL OF EXISTING SIDEWALKS, DRIVES, CURBS, AND PAVEMENT.
 - B. FULL DEPTH REMOVAL OF EXISTING BUILDING FOUNDATIONS, UNDERGROUND UTILITIES AND RELATED STRUCTURES.
 - C. CLEARING SITE OF VEGETATION AND TREES AS NOTED ON THE LANDSCAPE PLANS.
 - D. CLEARING SITE OF DEMOLITION DEBRIS.
 - E. REMOVAL FROM SITE AND DISPOSAL OF ALL EXCESS AND UNUSABLE MATERIAL.
 - F. COORDINATION WITH ALL UTILITY COMPANIES/OWNERS PRIOR TO DEACTIVATION OF EXISTING UTILITIES.

III. APPLICABLE CODES

- 1. DEMOLITION AND TRANSPORTATION OF DEBRIS SHALL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND REGULATIONS GOVERNING THESE OPERATIONS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY PERMITS, BONDS, LICENSES, ETC., REQUIRED FOR DEMOLITION AND CLEARING WORK.
- 2. ANY WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT, AND OTHER GOVERNMENTAL AGENCIES WHO MAY HAVE JURISDICTION OF THE PUBLIC RIGHT-OF-WAY. SAID WORK SHALL NOT BEGIN UNTIL THE CONTRACTOR HAS OBTAINED ALL PERMITS AND NOTIFIED ALL THE GOVERNING AUTHORITIES.

IV. SEQUENCING AND SCHEDULING

- 1. AREAS ADJACENT TO DEMOLITION AND REMOVAL WORK MAY BE OCCUPIED AND THEIR ACTIVITIES CANNOT BE INTERRUPTED OR DISTURBED DURING NORMAL WORKING HOURS. DEMOLITION SCHEDULE SHALL BE COORDINATED WITH ALL ADJACENT PROPERTY OWNERS AND ANY OTHER PARTIES WHOSE DAILY ACTIVITIES WOULD BE AFFECTED BY THE DEMOLITION WORK.
- 2. COORDINATE WITH APPLICABLE UTILITY COMPANIES FOR UTILITY LINE REMOVAL, CAPPING AND UTILITY SHUTDOWNS NECESSITATED BY REMOVAL WORK.

V. ENVIRONMENTAL PROTECTION

- 1. CONTROL AMOUNT OF DUST RESULTING FROM CONSTRUCTION OR DEMOLITION TO PREVENT SPREAD OF DUST TO OTHER BUILDINGS AND TO AVOID CREATION OF A NUISANCE IN SURROUNDING AREAS. USE OF WATER TO CONTROL DUST WILL NOT BE PERMITTED WHEN IT WILL RESULT IN, OR CREATE, HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS FLOODING.
- 2. NOISE PRODUCING ACTIVITIES SHALL BE HELD TO A MINIMUM. INTERNAL COMBUSTION ENGINES AND COMPRESSORS, ETC., SHALL BE EQUIPPED WITH MUFFLERS TO REDUCE NOISE TO A MINIMUM. CONTRACTOR SHALL COMPLY WITH ALL NOISE ABATEMENT ORDINANCES.
- 3. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED.
- 4. DISPOSITION OF DEMOLISHED MATERIALS BY BURNING IS NOT PERMITTED.
- 5. ALL CLEARING SHALL BE PERFORMED IN A MANNER SUCH AS TO PREVENT ANY WASH-OFF OF SOILS AND DEBRIS FROM THE SITE INTO PUBLIC RIGHT-OF-WAY WATER BODIES, AND/OR STORM DRAINAGE SYSTEMS. APPROPRIATE SEDIMENTATION PONDS, DIKES, COLLARS, AND FILTER MEDIA SHALL BE EMPLOYED TO INSURE COMPLIANCE WITH THESE REQUIREMENTS. WHERE A SPECIFIC STATUTE GOVERNS THESE PROCEDURES, SUCH STATUTE SHALL BE COMPLIED WITH IN ITS ENTIRETY.
- 6. AT ALL TIMES DURING THE CLEARING OPERATION, THE EXPOSED AREAS OF SUBGRADE SHALL BE MAINTAINED IN A CONDITION COMPATIBLE WITH POSITIVE DRAINAGE OF THE WORK AREA. NO WATER WILL BE PERMITTED TO STAND IN OPEN EXCAVATIONS. ALL STORMWATER RUNOFF SHALL BE CONTAINED WITHIN THE SITE. FAILURE TO MAINTAIN SUCH DRAINAGE SHALL BE CONSIDERED ADEQUATE CAUSE TO ORDER TEMPORARY SUSPENSION OF THE WORK.
- 7. IF IT SHOULD BECOME NECESSARY TO STOP WORK FOR INDEFINITE PERIODS, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE OR DETERIORATION OF THE WORK ALREADY PERFORMED, PROVIDE SUITABLE AND FUNCTIONAL DRAINAGE BY OPENING DITCHES, FILTER DRAINS, TEMPORARY CUT—OFF LINES, ETC., AND ERECT TEMPORARY PROTECTIVE STRUCTURES WHERE NECESSARY. ALL EMBANKMENTS SHALL BE BACK—BLADED AND SUITABLY SEALED TO PROTECT AGAINST ADVERSE WEATHER CONDITIONS.
- 8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS WHEN REMOVING ABANDONED AND DE-ENERGIZED MATERIALS. IF ASBESTOS PIPES ARE ENCOUNTERED, THE CONTRACTOR WILL TAKE ALL NECESSARY ABATEMENT STEPS AS REQUIRED BY GOVERNING REGULATIONS TO SAFELY REMOVE AND DISPOSE OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF SAID MATERIALS.
- 9. THE CONTRACTOR SHALL SECURE THE WORK AREA WITH FENCING OR OTHER MEANS AS APPROVED BY THE OWNER.

VI. TRAFFIC MAINTENANCE

- 1. THE CONTRACTOR SHALL FOLLOW FDOT MAINTENANCE OF TRAFFIC PROCEDURES DURING DEMOLITION IN PUBLIC RIGHT-OF-WAYS AND PRIVATE DRIVEWAYS, PEDESTRIANS PATHS, AND ROADWAYS (INDEX 600 SERIES), AND PREPARE AND OBTAIN APPROVAL OF SUCH MAINTENANCE OF TRAFFIC PLAN FROM THE APPROPRIATE REGULATORY AGENCY.
- 2. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING, SHORING, TEMPORARY CROSSOVER FOR PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING GUARDRAILS, LAMPS, WARNING SIGNS AND FLAGS AS REQUIRED BY AGENCIES HAVING JURISDICTION, AND SHALL NOT REMOVE THESE UNTIL THE NEED FOR PROTECTION CEASES.
- 3. THE CONTRACTOR MAY NOT CLOSE ANY SIDEWALKS WITHOUT PROVIDING ALTERNATE ROUTES IN ACCORDANCE WITH FDOT INDEX 660 AND OBTAINING APPROVAL FROM THE GOVERNING JURISDICTIONAL AGENCY.
- 4. THE CONTRACTOR SHALL CONDUCT REMOVAL OPERATIONS SO THAT TRAFFIC IS MAINTAINED ALONG EXISTING STREETS AND WALKS. ALL PUBLIC PAVED STREETS AND WALKWAYS MUST BE KEPT FREE OF DEBRIS. THE CONTRACTOR MUST REMOVE MATERIAL AND OTHER MATTER TRACKED OR FALLEN ONTO TRAFFIC SURFACES.

VII. CLEAN UP

- REMOVE DEMOLISHED CONSTRUCTION MATERIALS AND RELATED DEBRIS FROM
 THE SITE ON A REGULAR BASIS. ACCUMULATION OF DEBRIS ON THE SITE WILL
 NOT BE PERMITTED. SELLING OF SALVAGEABLE MATERIALS IS NOT PERMITTED
 AT THE SITE.
- 2. REMOVE MATERIALS, INCLUDING DEBRIS AND DUST, AND DISPOSE OF LEGALLY OFF SITE. NO DEBRIS SHALL BE BURNED OR BURIED ON THE SITE AS A MEANS OF DISPOSAL. USE METHODS APPROVED BY THE REGULATORY AGENCIES PRIOR TO BEGINNING CLEANUP OPERATIONS. USE OF BLOWERS TO DISTRIBUTE DUST WILL NOT BE PERMITTED.
- MATERIAL DESIGNATED FOR REMOVAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND ANY SALVAGE VALUE THERE FROM WILL ACCRUE TO THE CONTRACTOR.

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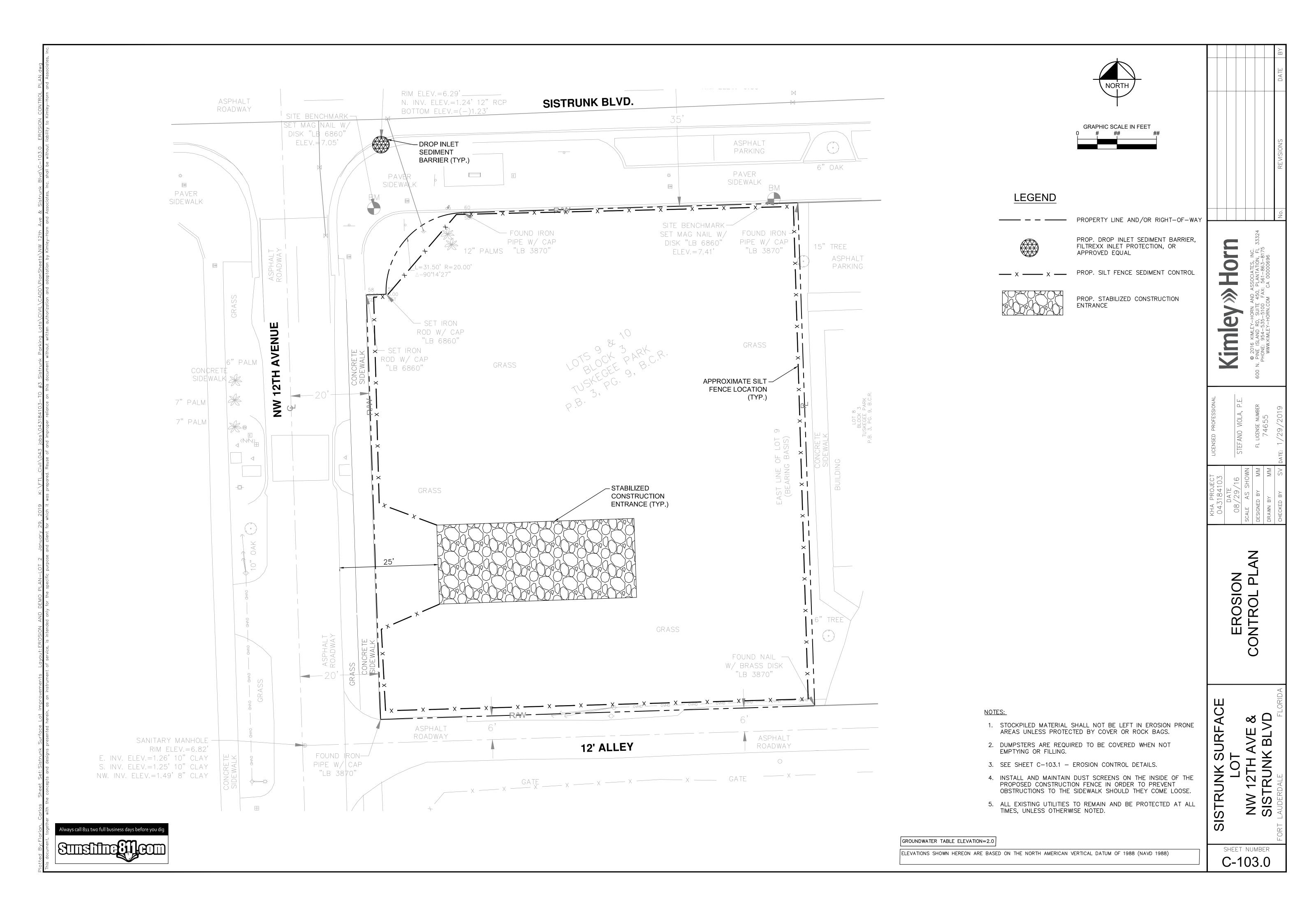
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BEST MANAGEMENT PRACTICES (BMPS):

THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH APPROPRIATE CONDITIONS OF THE BROWARD COUNTY LAND DEVELOPMENT REGULATIONS, THE RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP), CHAPTER 17-25, F.A.C., THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), CHAPTER 40D-4, F.A.C. AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) DOCUMENT NO. EPA 832/R-92-005 (SEPTEMBER 1992). THE PLAN ADDRESSES THE FOLLOWING:

- A. PREVENT LOSS OF SOIL DURING CONSTRUCTION BY STORMWATER RUNOFF AND/OR WIND EROSION, INCLUDING PROTECTING TOPSOIL BY STOCKPILING FOR REUSE.
- B. SEDIMENTION PROTECTION OF STORM SEWER OR RECEIVING STREAM.
- C. PREVENT POLLUTING THE AIR WITH DUST AND PARTICULATE MATTER. THE VARIOUS TECHNIQUES OR ACTIONS IDENTIFIED UNDER EACH SECTION INDICATE THE APPROPRIATE SITUATION WHEN THE TECHNIQUES SHOULD BE EMPLOYED. ALSO IDENTIFIED IS A CROSS-REFERENCE TO A DIAGRAM OR FIGURE REPRESENTING THE TECHNIQUE. IT SHOULD BE NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BMP(S). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS. CONTRACTOR SHALL PREPARE REQUIRED NPDES DOCUMENTATION AND OBTAIN PERMIT PRIOR TO COMMENCEMENT OF CONSTRUCTION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE THE REQUIRED NPDES DOCUMENT AND OBTAIN THE NPDES PERMIT. ALL COST ASSOCIATED WITH SUCH WORK SHALL BE DEEMED INCIDENTAL TO THE PROJECT LUMP SUM

GENERAL EROSION CONTROL NOTES:

- A. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THESE EROSION CONTROL DRAWINGS, THE STANDARD DETAILS, THE NPDES PERMIT (TO BE OBTAINED BY CONTRACTOR) AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THIS DRAWING AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP) IN ALL CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- FUEL SPILLS AND LEAKS PREVENTION
 PREVENT/REDUCE VEHICLE AND EQUIPTMENT WASHING AND STEAM CLEANING
 VEHICLE AND EQUIPTMENT MAINTENANCE AND REPAIR
- PROPER OUTDOOR LOADING/UNLOADING OF MATERIALS
 PREVENT/REDUCE OUTDOOR STORAGE OF RAW MATERIALS, PRODUCTS, AND BY-PRODUCTS
 SOLID WASTE MANAGEMENT
- HAZARDOUS WASTE MANAGEMENT CONCRETE WASTE MANAGEMENT SANDBLASTING WASTE MANAGEMENT
- SANDBLASTING WAS IE MANAGEMENT STRUCTURE CONSTRUCTION AND PAINTING
- SPILL PREVENTION AND CONTROL
 CONTAMINATED SOIL MANAGEMENT
- 13. SANITARY/SEPTIC WASTE MANAGEMENT14. SOIL EROSION CONTROL

COMPLETE

15. STORM WATER TURBIDITY MANAGEMENT

ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

- D. BEST MANAGEMENT PRACTICES (BMPS) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. CONTRACTOR MUST MAINTAIN ALL PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS ON SITE AT ALL TIMES.
- F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- G. CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING THOSE PORTIONS OF THE SITE NECESSARY TO IMPLEMENT PERIMETER CONTROL MEASURES. CLEARING AND GRUBBING FOR THE REMAINING PORTIONS OF THE PROPOSED SITE SHALL COMMENCE ONCE PERIMETER CONTROLS ARE IN PLACE. PERIMETER CONTROLS SHALL BE ACTIVELY MAINTAINED UNTIL SAID AREAS HAVE BEEN STABILIZED AND SHALL BE REMOVED ONCE FINAL STABILIZATION IS
- H. GENERAL EROSION CONTROL BMPS SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND POTENTIAL LAKE SLOPE CAVE-INS. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED AS SOON AS POSSIBLE DURING CONSTRUCTION.
- I. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- J. SURFACE WATER QUALITY SHALL BE MAINTAINED BY EMPLOYING THE FOLLOWING BMP'S IN THE CONSTRUCTION PLANNING AND CONSTRUCTION OF ALL IMPROVEMENTS.

STORM WATER EROSION CONTROL PRACTICES:

- A. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM DETENTION PONDS AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- B. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- C. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (COMPOST SOCK DEVICES, ETC.) TO PREVENT EROSION.
- D. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES.
- E. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:
- IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
- STORMWATER INLETS SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION
 MEASURES SHALL BE EMPLOYED AS SOON AS PRACTICAL DURING THE VARIOUS STAGES OF
 INLET CONSTRUCTION. SILT BARRIERS SHALL REMAIN IN PLACE UNTIL SODDING AROUND
 INLETS IS COMPLETE.
- 3. WHEN NEEDED A TEMPORARY SEDIMENT TRAP SHOLD BE CONSTRUCTED TO DETAIN SEDIMENT-LADEN RUNOFF FROM DISTURBED AREAS.

1. CONTRACTOR TO CONSIDER POTENTIAL DEWATERING ACTIVITIES WHEN PREPARING BID

3. CONTRACTOR TO USE BEST MANAGEMENT PRACTICES TO ENSURE COMPLIANCE WITH

CTION ACTIVITIES AND DEWATERING OPERATIONS.

HE MEASURE IDENTIFIED ON THIS PLAN ARE ONLY

BMP(S). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND

NPDES AND WATER MANAGEMENT DISTRICT REGULATIONS FOR STORMWATER

RES AS NECESSARY TO CONFORM TO CURRENT CITY, FDEP ECIFICATIONS.

2. CONTRACTOR SHALL OBTAIN ANY NECESSARY DEWATERING PERMITS AS SITE

CONDITIONS AND CONSTRUCTION ACTIVITIES REQUIRE.

DOCUMENTS FOR THIS PROJECT

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F. SILT BARRIERS, ANY SILT WHICH ACCUMULATES BEHIND THE BARRIERS, AND ANY FILL USED TO ANCHOR THE BARRIERS SHALL BE REMOVED PROMPTLY AFTER THE END OF THE MAINTENANCE PERIOD SPECIFIED FOR THE BARRIERS.

- G. SLOPES OF BANKS OF RETENTION/DETENTION PONDS SHALL BE CONSTRUCTED NOT STEEPER THAN 3H:1V FROM TOP OF BANK TO TWO FEET BELOW NORMAL WATER LEVEL, AS APPLICABLE.
- H. SOD SHALL BE PLACED FOR A 2-FOOT WIDE STRIP ADJOINING ALL CURBING AND AROUND ALL INLETS. SOD SHALL BE PLACED BEFORE SILT BARRIERS ARE REMOVED.
- WHERE REQUIRED TO PREVENT EROSION FROM SHEET FLOW ACROSS BARE GROUND FROM ENTERING A LAKE OR SWALE, A TEMPORARY SEDIMENT SUMP SHALL BE CONSTRUCTED.

 J. FILTER FABRIC SHOULD BE USED FOR STORM DRAIN INLET PROTECTION BEFORE FINAL

WIND EROSION CONTROL PRACTICES:

- A. WIND EROSION SHALL BE CONTROLLED BY EMPLOYING THE FOLLOWING METHODS AS NECESSARY AND APPROPRIATE:
- BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO
 MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IT MAY BE NECESSARY TO LIMIT
 CONSTRUCTION VEHICLE SPEED IF BARE EARTH HAS NOT BEEN EFFECTIVELY WATERED
 IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER
 CONSTRUCTION.
- 2. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED (SEE PERMANENT STABALIZATION PRACTICES FOR DETAILS). THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN. CLEARED SITE DEVELOPMENT AREAS NOT CONTINUALLY SCHEDULED FOR CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH HAY OR OVERSEEDED AND PERIODICALLY WATERED SUFFICIENTLY TO STABILIZE THE TEMPORARY GROUNDCOVER (SEE TEMPORARY STABALIZATION PRACTICES FOR DETAILS).
- 3. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS SHOULD INCLUDE ERECTION OF DUST CONTROL FENCES. A 6-FT GEOTEXTILE FILTER FIBER SHOULD BE HANGING AGAINST THE EXISTING CHAIN LINK FENCE AND GATE.
- B. ALL DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS

STABILIZATION PRACTICES:

SHALL BE IN ACCORDANCE WITH DEP DOCUMENT NO 62-621.300(4)(a)

STRUCTURAL PRACTICES

SHALL BE IN ACCORDANCE WITH DEP DOCUMENT NO 62-621.300(4)(a)

WASTE DISPOSAL:

- A. WASTE MATERIALS ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.
- B. HAZARDOUS WASTE HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.
- C. SANITARY WASTE SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.
- D. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

OFFSITE TRACKING:

- A. STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE MAJOR ROAD CONNECTED TO THE PROJECT SHALL BE CLEANED ONCE A DAY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK RESULTING FROM CONSTRUCTION TRAFFIC. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.
- B. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATION PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES, HAY BALES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OF OIL, GREASE OR LUBRICANTS. CONTRACTORS SHALL HAVE AVAILABLE, AND SHALL USE, ABSORBENT FILTER PADS TO CLEAN UP SPILLS AS SOON AS POSSIBLE AFTER OCCURRENCE.
- C. ALL WASH WATER FROM CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC. SHALL BE DETAINED ON SITE AND SHALL BE PROPERLY TREATED OR DISPOSED.
- D. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- E. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

MAINTENANCE:

- ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
- A. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
- B. B.ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.

- C. THE COMPOST ROCK FILTRATION DEVICE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF DEVICE. COMPOST SOCK SHALL BE REPAIRED TO ITS ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE COMPOST SOCK WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE COMPOST SOCK.
- D. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
- E. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
- F. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 10% AND AFTER CONSTRUCTION IS COMPLETE.
- G. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION.DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

H. A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE

- SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.
- I. ALL REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.
- J. THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.
- K. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

SPILL PREVENTION AND CONTROL:

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

- SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.
- 2. STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.
- 3. ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.
- 4. ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.
- 5. PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.
- ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

B. HAZARDOUS PRODUCTS

A GOOD HOUSEKEEPING

- 1. MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.
- 2. PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

C. PRODUCT SPECIFIC PRACTICES

- PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.
- THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN
 ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A
 COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE
 TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
- 3. PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MIST BE DISPOSED OF IN AN APPROVED MANNER
- MUST BE DISPOSED OF IN AN APPROVED MANNER.

 4. CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS

SPILL CLEAN UP:

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED ABOVE, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

- A. SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.
- B. THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.
- C. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ONSITE AND READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- D. ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

CONCRETE OR DRUM WASH WATER ON THE SITE.

- E. WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.
- F. TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.
- FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

 H. THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT

G. AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT

ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

SEQUENCE OF CONSTRUCTION

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND INSTALL SILT FENCE
 DEMOLISH EXISTING STRUCTURES, (IF APPLICABLE)
 CONSTRUCT AND STABILIZE SEDIMENT BASIN AND DRAINAGE SWALES WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO
- INSTALL CONTROL DEVICES LISTED ABOVE)

 4. INSTALL AND STABILIZE ANY NECESSARY HYDRAULIC CONTROL STRUCTURES (DIKES, CHECK DAMS. OUTLET TRAPS. ETC.)

PREPARE CLEARING AND GRUBBING OF THE SITE, (IF APPLICABLE)

START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES

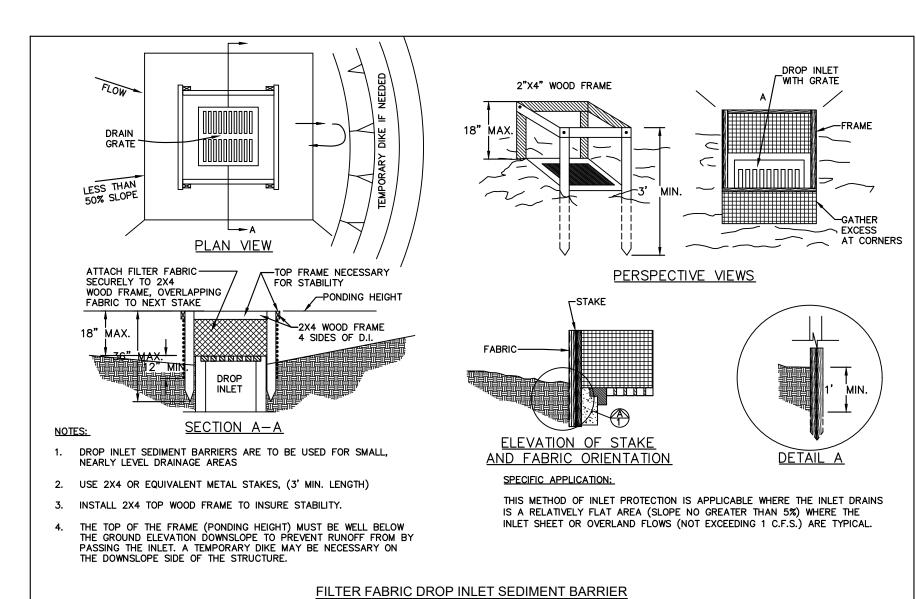
ONSITE DRAINAGE SYSTEM HAS BEEN INSTALLED

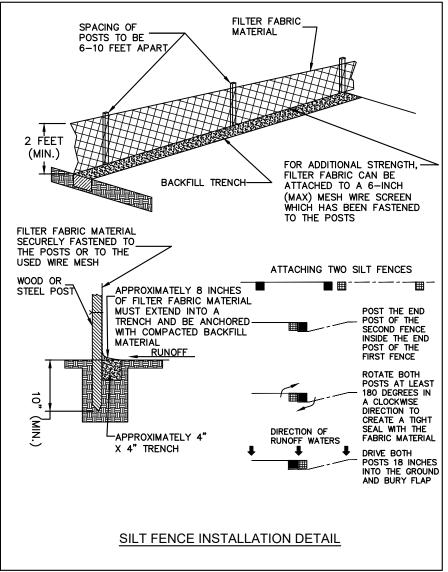
- PERFORM MASS GRADING, ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS
- 8. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE AS REQUIRED BY GENERIC PERMIT

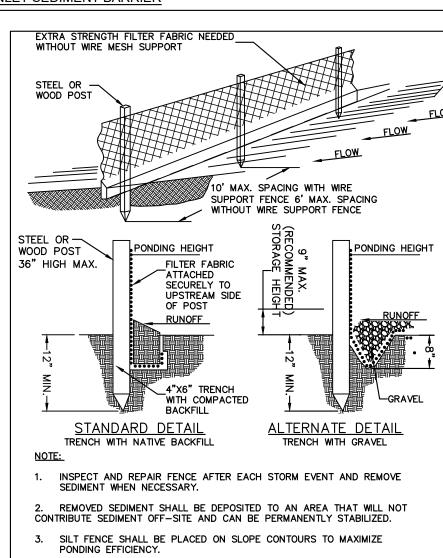
 9. OFFSITE HEADWALL CONNECTION TO OPWCD SHALL BE MADE AFTER THE ENTIRE

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMPS. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

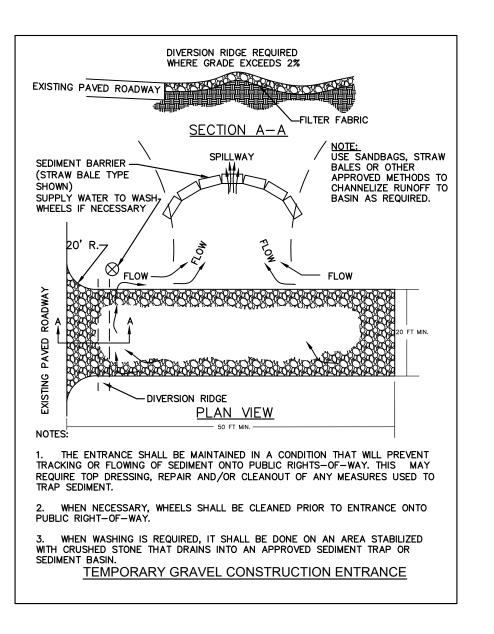
CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS NECESSARY







SILT FENCE DETAIL





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EROSION CONTROL DETAILS

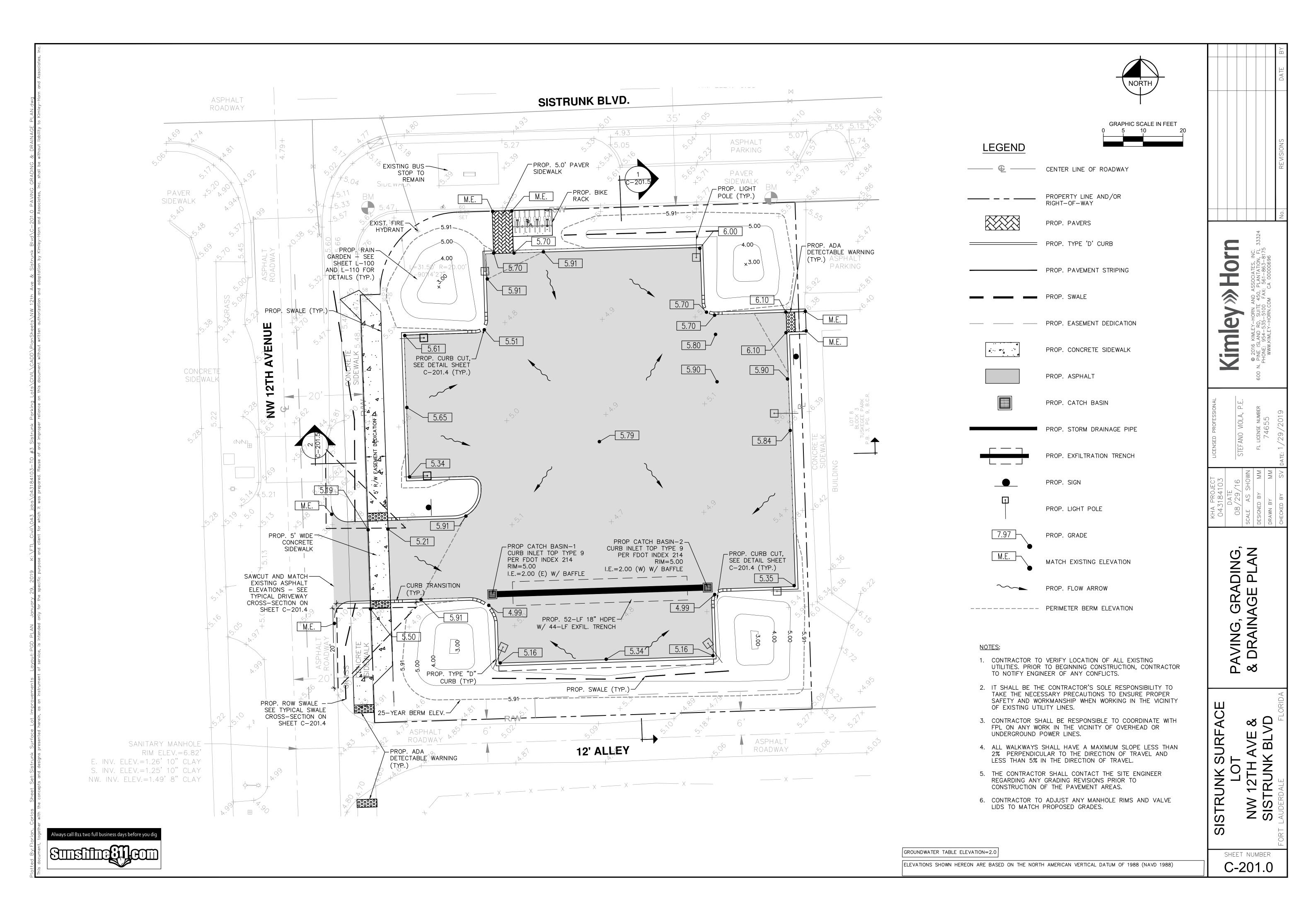
SISTRUNK SURFACE

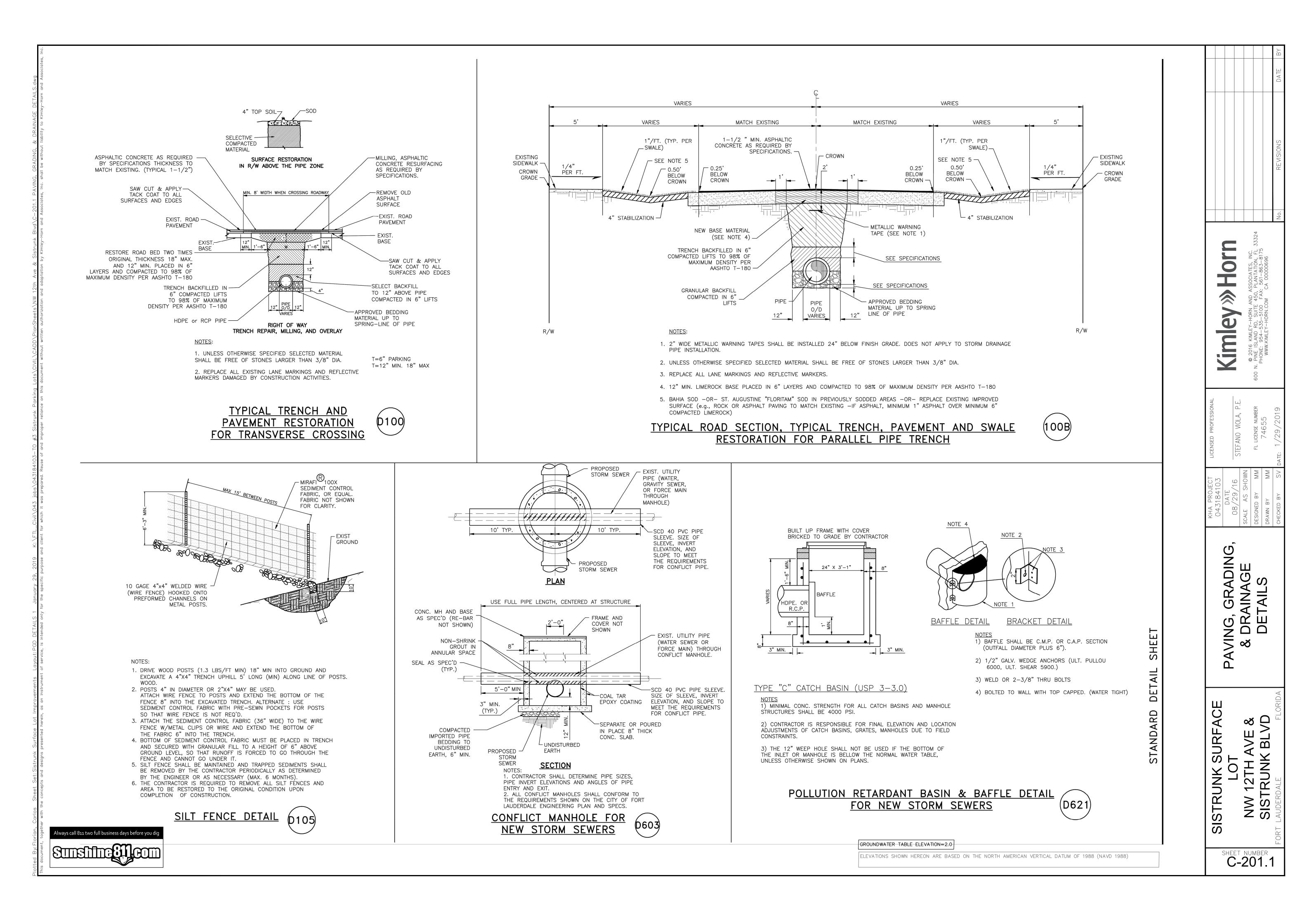
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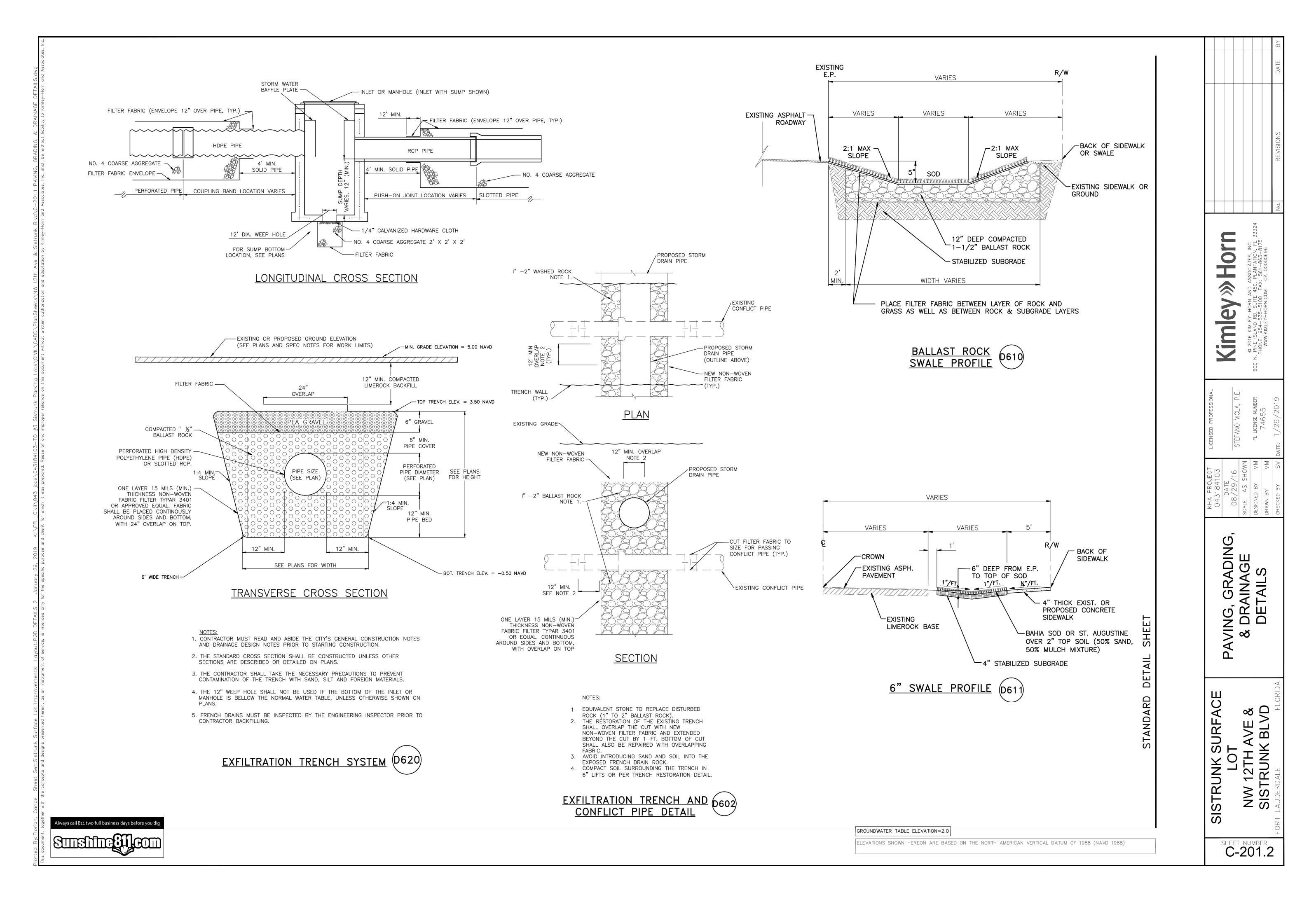
NW 12TH AVE &

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SIDEWALK

Hor

Kim

GRADING AINAGE TAILS

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SHEET NUMBER

C-201.3

NW SIST

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|--8"--|-6"--|

V-GUTTER

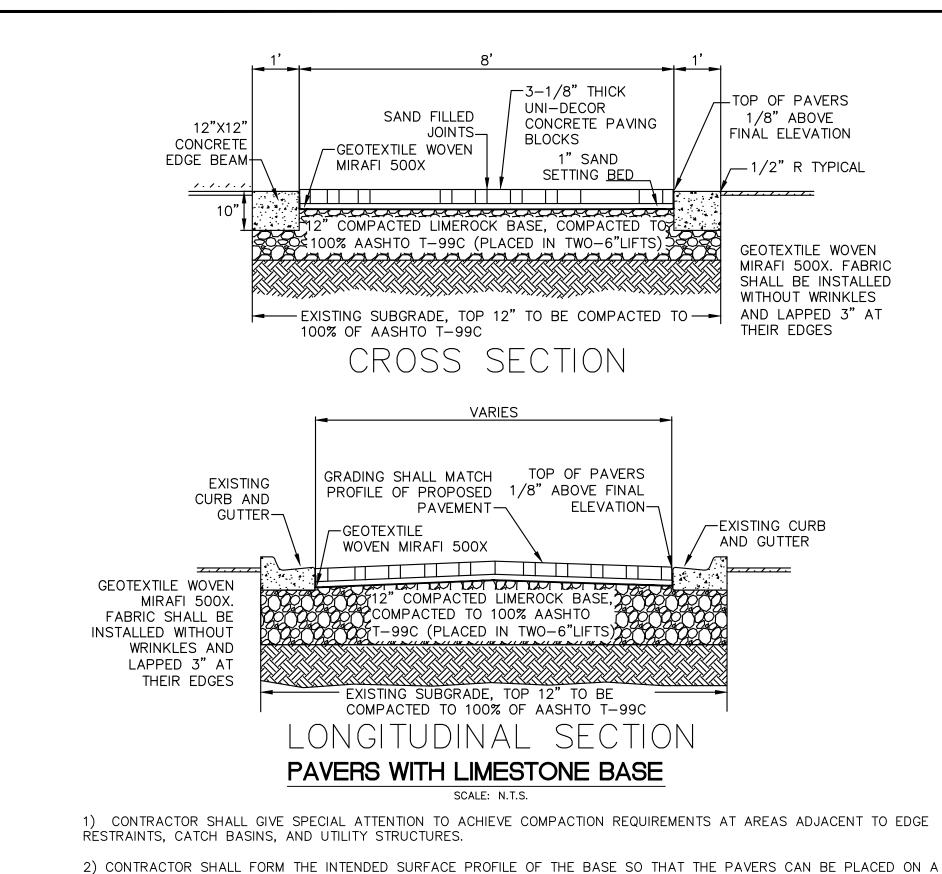
2' DETECTABLE

WARNING SURFACE*

16" CURB WITH SIDEWALK

PAVEMENT

PAVEMENT₁



1) CONTRACTOR SHALL GIVE SPECIAL ATTENTION TO ACHIEVE COMPACTION REQUIREMENTS AT AREAS ADJACENT TO EDGE

UNIFORM THICKNESS OF BEDDING SAND.

3) SURFACE OF COMPACTED BASE SHALL BE SMOOTH WITH A SURFACE SMOOTHNESS MAXIMUM TOLERANCE OF $\pm -3/8$ OVER A 10' STRAIGHTEDGE. UNEVEN AREAS OF THE LIMEROCK BASE SURFACE MUST BE MADE LEVEL PRIOR TO PLACING THE BEDDING SAND. BEDDING SAND SHALL NOT BE USED TO COMPENSATE FOR AN UNEVEN BASE.

4) CONTRACTOR SHALL ENSURE THAT ALL SURROUNDINGS CONTAINING EDGES, AND COMPACTED BASE ARE COMPLETED PRIOR TO INITIATING PAVER INSTALLATION.

5) BEDDING SAND SHALL CONFORM TO ASTMC33 (CONCRETE SAND) WITH 0% PASSING NO.200 SIEVE. SPREAD BEDDING SAND AT OPTIMUM MOISTURE CONTENT EVENLY OVER BASE AND SCREED SAND TO AN EVEN THICKNESS OF 1" (+/- 3/16in.). THE

6) LAY PAVERS IN THE PATTERN INDICATED. MAINTAIN STRAIGHT JOINT LINES. JOINTS BETWEEN PAVERS SHALL BE CONSISTENT AND BETWEEN 1/16 TO 1/8 INCH WIDE.

7) AFTER AN AREA OF PAVERS ARE PLACED, IT SHALL BE COMPACTED WITH A VIBRATING PLATE COMPACTOR, EXERTING 5000 LBS. OF CENTRIFUGAL COMPACTION FORCE, WITH SURFACE CLEAN AND JOINTS UNSANDED. A MINIMUM OF THREE PASSES SHALL BE MADE. PLATE VIBRATOR SHALL HAVE A RUBBER MAT OR ROLLER FEET TO AVOID CHIPPING THE PAVERS.

8) JOINT SAND SHALL BE FINER THAN THE BEDDING SAND TO FACILITATE FILLING OF THE JOINTS. THIS CAN OBTAINED BY PASSING THE BEDDING SAND THROUGH A No. 8 SIEVE. AFTER THE FIRST PASS OF THE PLATE COMPACTOR, DRY JOINT SAND SHALL BE SWEPT INTO THE JOINTS AND THE PAVERS COMPACTED, REPEAT THE PROCESS UNTIL THE JOINTS ARE FILLED WITH SAND. WET SAND SHALL NOT BE INSTALLED.

9) CONTRACTOR SHALL LEAVE TOP OF PAVERS 3/16" ABOVE FINAL ELEVATION TO COMPENSATE FOR POSSIBLE MINOR SETTLING. 10) ALL CUTS TO BE VERTICAL AND TRUE, NO EDGE PIECE TO BE SMALLER THAN 1/3 FULL PAVER SIZE.

ADA CURB RAMPS GENERAL NOTES*:

1. PUBLIC SIDEWALK CURB RAMPS SHALL BE CONSTRUCTED IN THE PUBLIC RIGHT OF WAY AT LOCATIONS THAT WILL PROVIDE CONTINUOUS UNOBSTRUCTED PEDESTRIAN CIRCULATION PATHS TO PEDESTRIAN AREAS, ELEMENTS, AND FACILITIES IN THE PUBLIC RIGHT OF WAY AND TO ACCESSIBLE PEDESTRIAN ROUTES ON ADJACENT SITES. CURBED FACILITIES WITH SIDEWALKS AND THOSE WITHOUT SIDEWALKS ARE TO HAVE CURB RAMPS CONSTRUCTED AT ALL STREET INTERSECTIONS AND AT TURNOUTS THAT HAVE CURBED RETURNS. RAMPS CONSTRUCTED AT LOCATIONS WITHOUT SIDEWALKS SHALL HAVE A LANDING CONSTRUCTED AT THE TOP OF EACH RAMP.

2. THE LOCATION AND ORIENTATION OF CURB RAMPS SHALL BE AS SHOWN IN THE PLANS.

3. CURB RAMP RUNNING SLOPES AT UNRESTRAINED SITES SHALL NOT BE STEEPER THAN 1:12 AND CROSS SLOPE SHALL BE 0.02 OR FLATTER. TRANSITION SLOPES SHALL NOT BE STEEPER THAN 1:12.

WHEN ALTERING PEDESTRIAN FACILITIES WHERE EXISTING SITE DEVELOPMENT PRECLUDES THE ACCOMMODATION OF A RAMP SLOPE OF 1:12, A RUNNING SLOPE BETWEEN 1:12 AND 1:10 IS PERMITTED FOR A RISE OF 6" MAXIMUM AND A RUNNING SLOPE OF BETWEEN 1:10 AND 1:8 IS PERMITTED FOR A RISE OF 3" MAXIMUM. WHERE COMPLIANCE WITH THE REQUIREMENTS FOR A CROSS SLOPE CANNOT BE FULLY MET, THE MINIMUM FEASIBLE CROSS SLOPE SHALL BE PROVIDED.

RAMP RUNNING SLOPE IS NOT REQUIRED TO EXCEED 8' IN LENGTH, EXCEPT AT SITES WHERE THE PLANS SPECIFY A GREATER LENGTH.

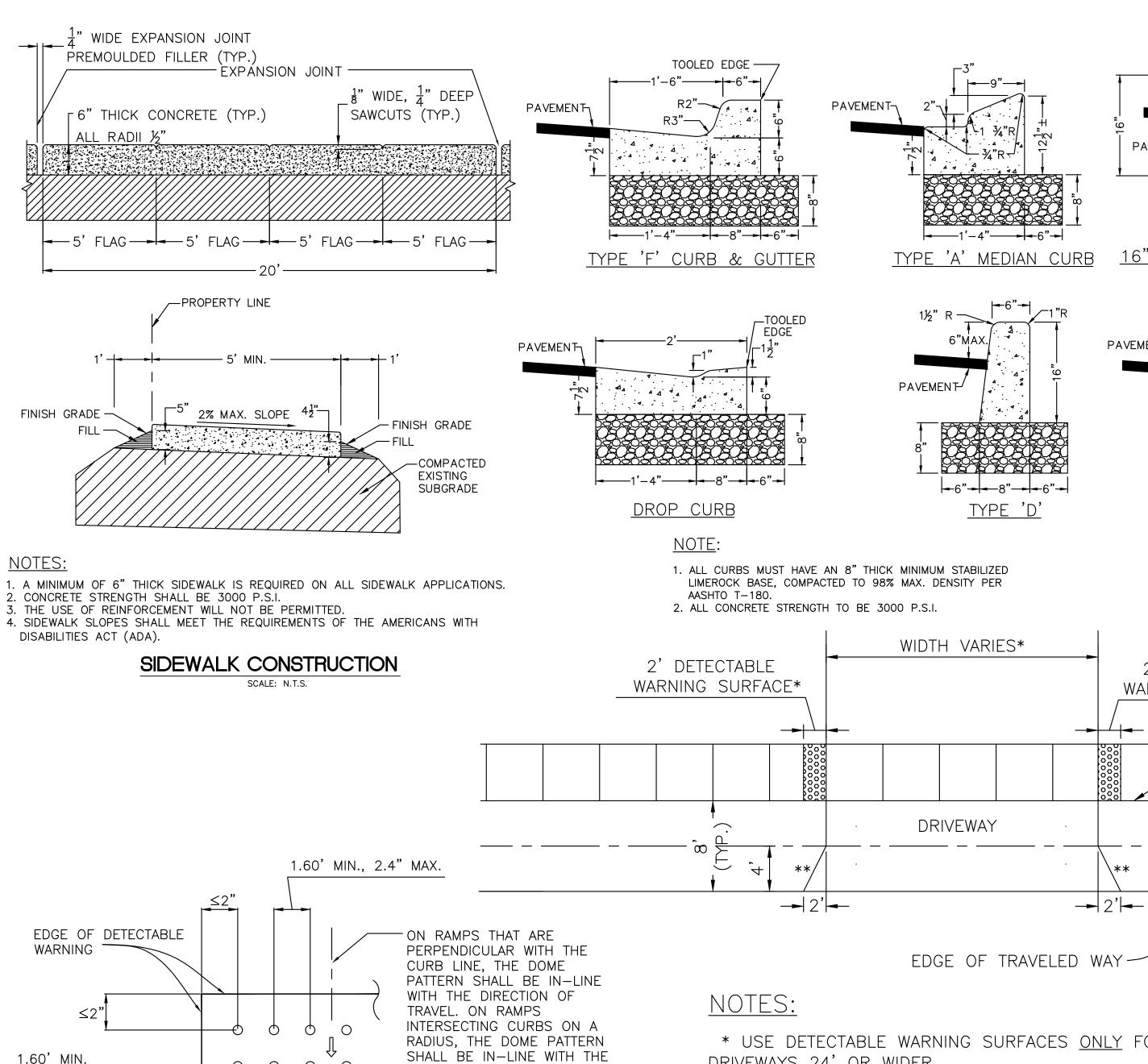
4. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, THEN THE WALK SHALL HAVE TRANSITION SLOPES TO THE RAMP; THE MAXIMUM SLOPE OF THE TRANSITIONS SHALL BE 1:12. RAMPS WITH CURB RETURNS MAY BE USED AT LOCATIONS WHERE OTHER IMPROVEMENTS PROVIDE GUIDANCE AWAY FROM THAT PORTION OF THE CURB PERPENDICULAR TO THE SIDEWALK; IMPROVEMENTS FOR GUIDANCE ARE NOT REQUIRED AT CURB RAMPS FOR LINEAR PEDESTRIAN TRAFFIC.

5. CURB RAMP DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24" FROM THE BACK OF THE CURB. DETECTABLE WARNING SURFACES SHALL BE VANGUARD, ARMOR TILE, OR APPROVED EQUAL.

6. WHERE A RAMP IS CONSTRUCTED WITHIN EXISTING EXISTING CURB, CURB AND GUTTER, AND/OR SIDEWALK, THE EXISTING CURB OR CURB AND GUTTER SHALL BE REMOVED TO THE NEAREST JOINT BEYOND THE CURB TRANSITIONS OR TO THE EXTENT THAT NO REMAINING SECTION OF CURB OR CURB AND GUTTER IS LESS THAN 5' LONG. THE EXISTING SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT BEYOND THE TRANSITION SLOPE OR WALK AROUND OR TO THE EXTENT THAT NO REMAINING SECTION OF SIDEWALK IS LESS THAN 5' LONG.

7. DETECTABLE WARNING SURFACE COLOR SHALL CONTRAST WITH SURROUNDING SURFACE AS DIRECTED BY CITY ENGINEER (DEFAULT COLOR IS YELLOW)

* AMENDED FROM FDOT INDEX 304



DIRECTION OF TRAVEL TO THE

EXTENT PRACTICAL.

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PLAN VIEW *

OF THE BASE DIAMETER.

0.9" MIN.

1.4" MAX.

THE TOP WIDTH OF THE DOME SHALL BE A

MINIMUM OF 50% AND A MAXIMUM OF 65%

TRUNCATED DOME *

TRAVEL 24 INCHES FROM THE BACK OF THE CURB.

* AMENDED FROM FDOT INDEX 304

0 0 0 0

BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

2.4" MAX.

0

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INTEGRAL DOME

 $0.2" \pm 0.02"$

ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACE

THAT EXTEND THE FULL WIDTH OF RAMP AND IN THE DIRECTION OF

* USE DETECTABLE WARNING SURFACES ONLY FOR DRIVEWAYS 24' OR WIDER.

** 4' FLARED RADIUS OPTIONAL

CITY OF FORT LAUDERDALE STANDARDS AND

2. SIDEWALKS ADJOINING 24' DRIVES, ALLEYWAYS, OR STREETS

DIRECTION OF TRAVEL. THE MINIMUM LENGTH OF

THE EDGE OF DRIVEWAYS, EDGE OF SIDE ROADS, OR STREETS.

3. SIDEWALKS SHALL BE CONTINUOUS THROUGH ALL DRIVEWAYS REGARDLESS OF DRIVEWAY WIDTH.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988)

1. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS (SEE DETAIL C1.3).

SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH OF THE SIDEWALK IN THE

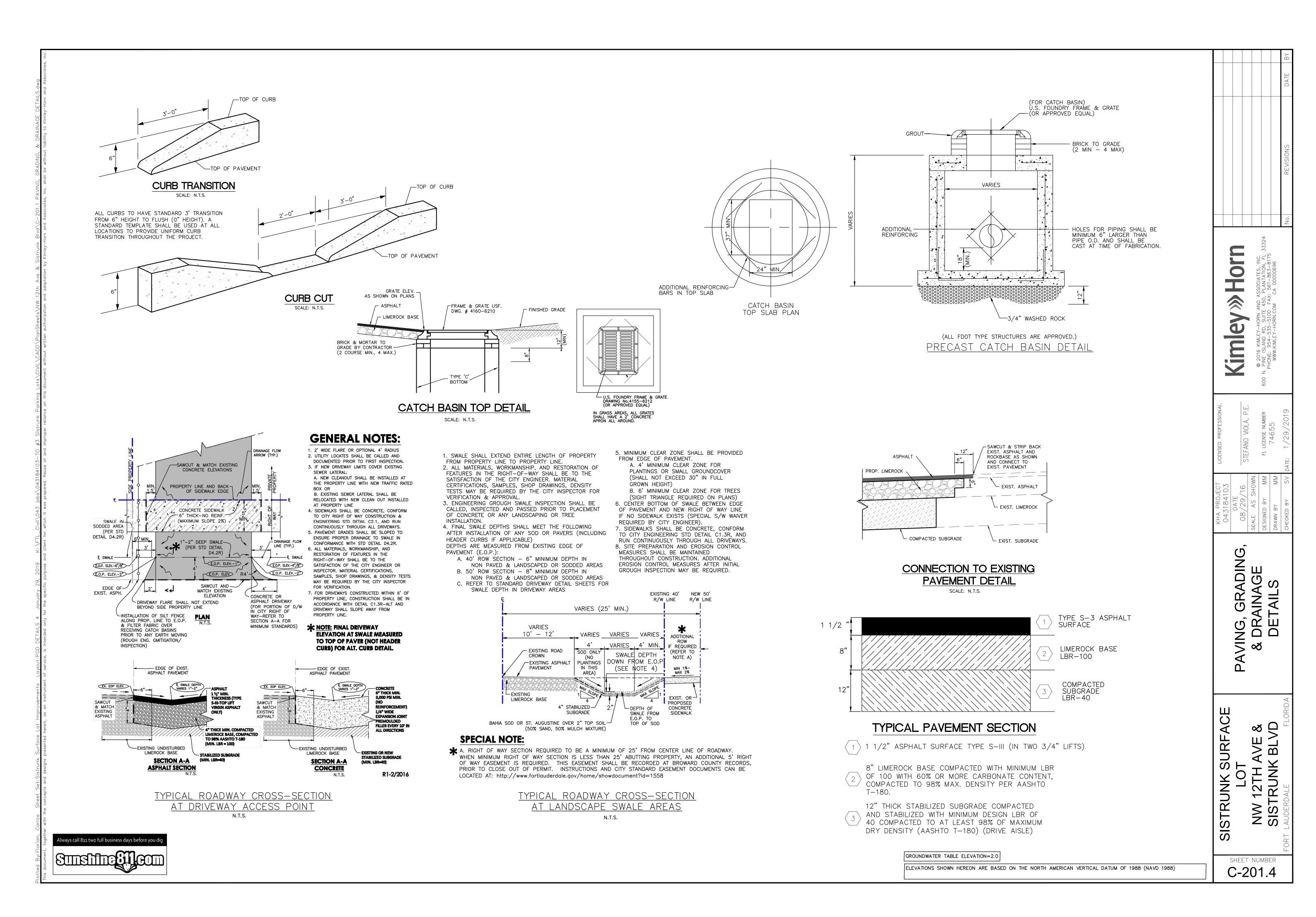
THE DETECTABLE WARNING SURFACE SHALL BE 24" FROM

* AMENDED FROM FDOT INDEX 310

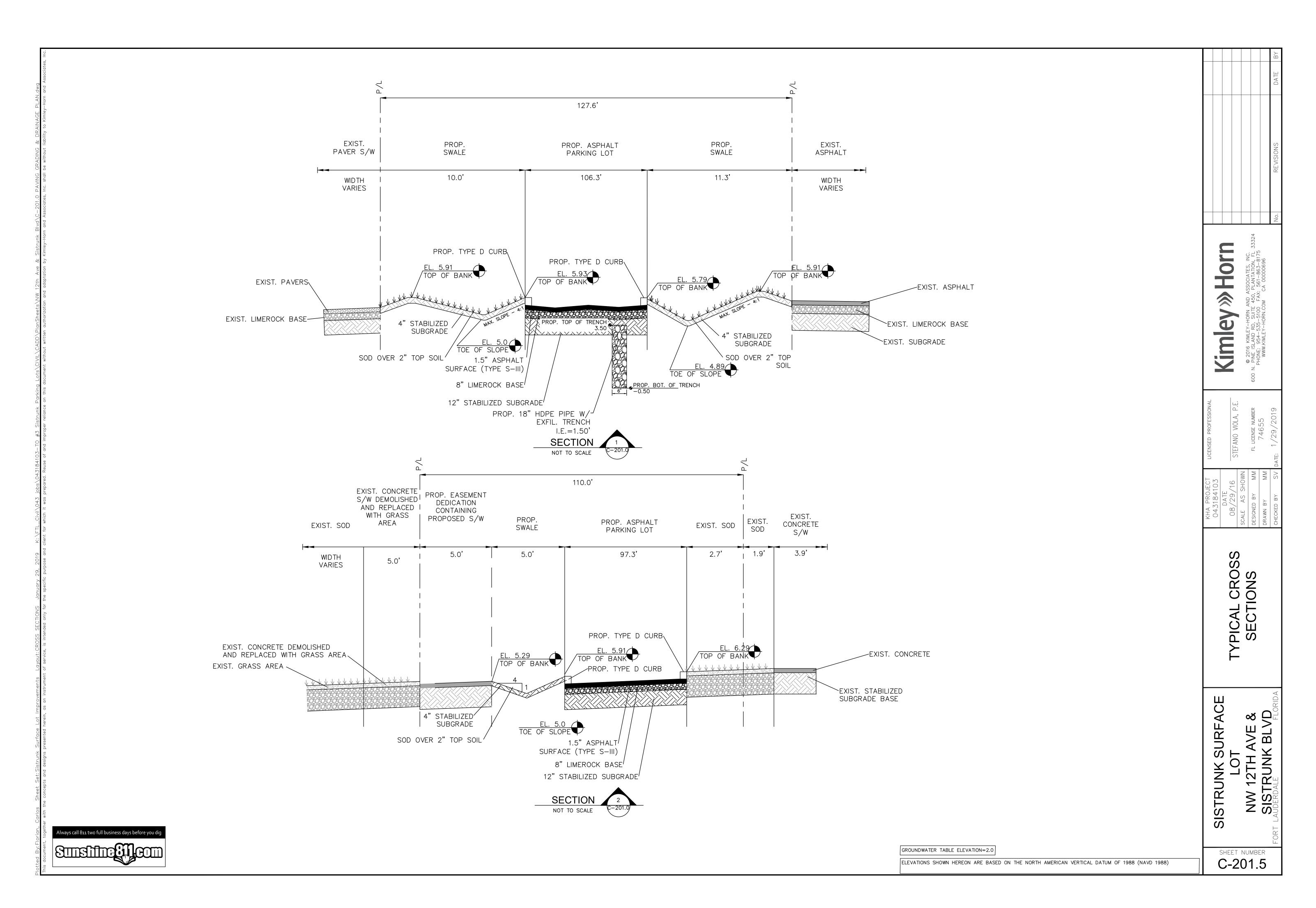
GROUNDWATER TABLE ELEVATION=2.0

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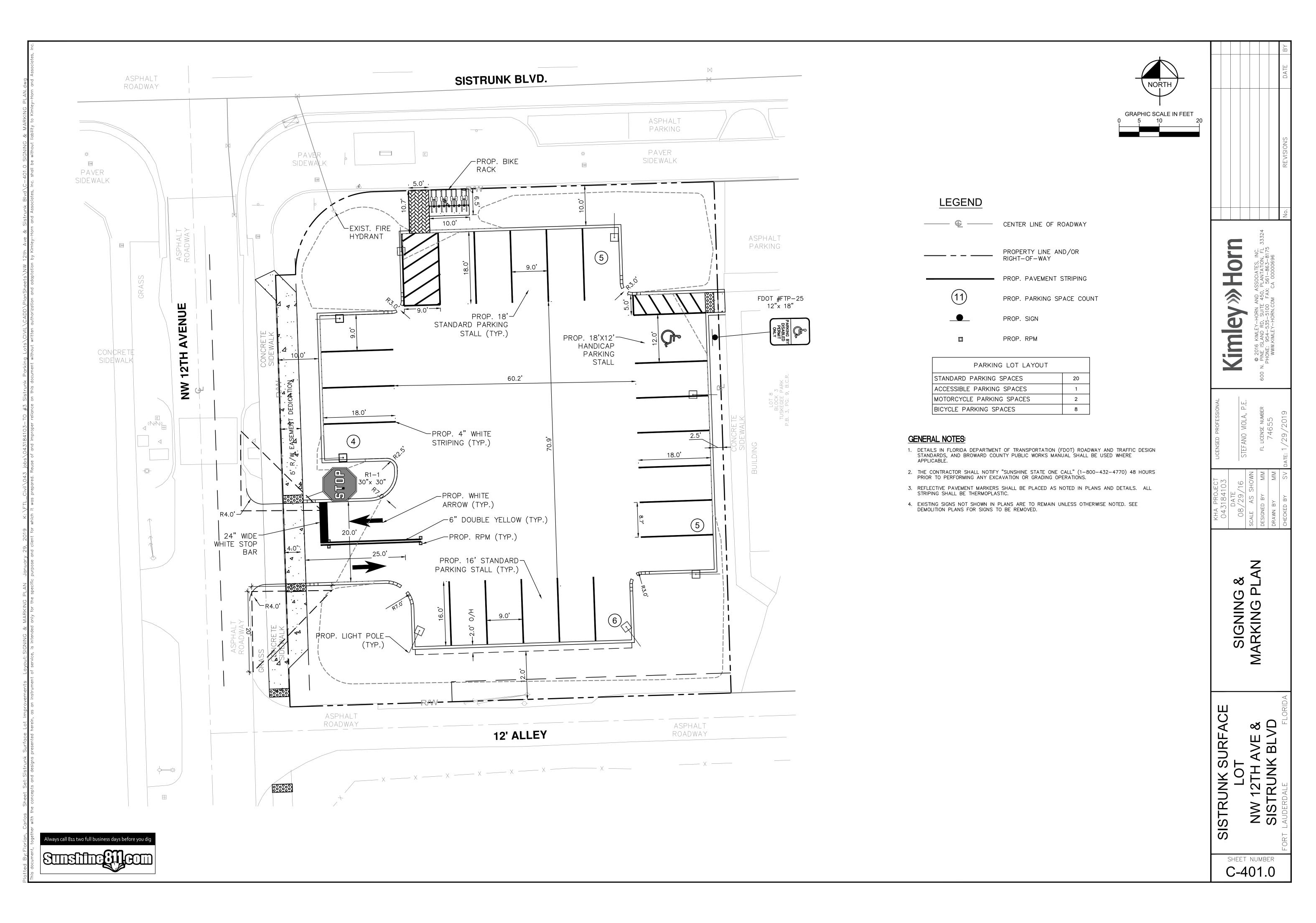
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City of Fort Lauderdale



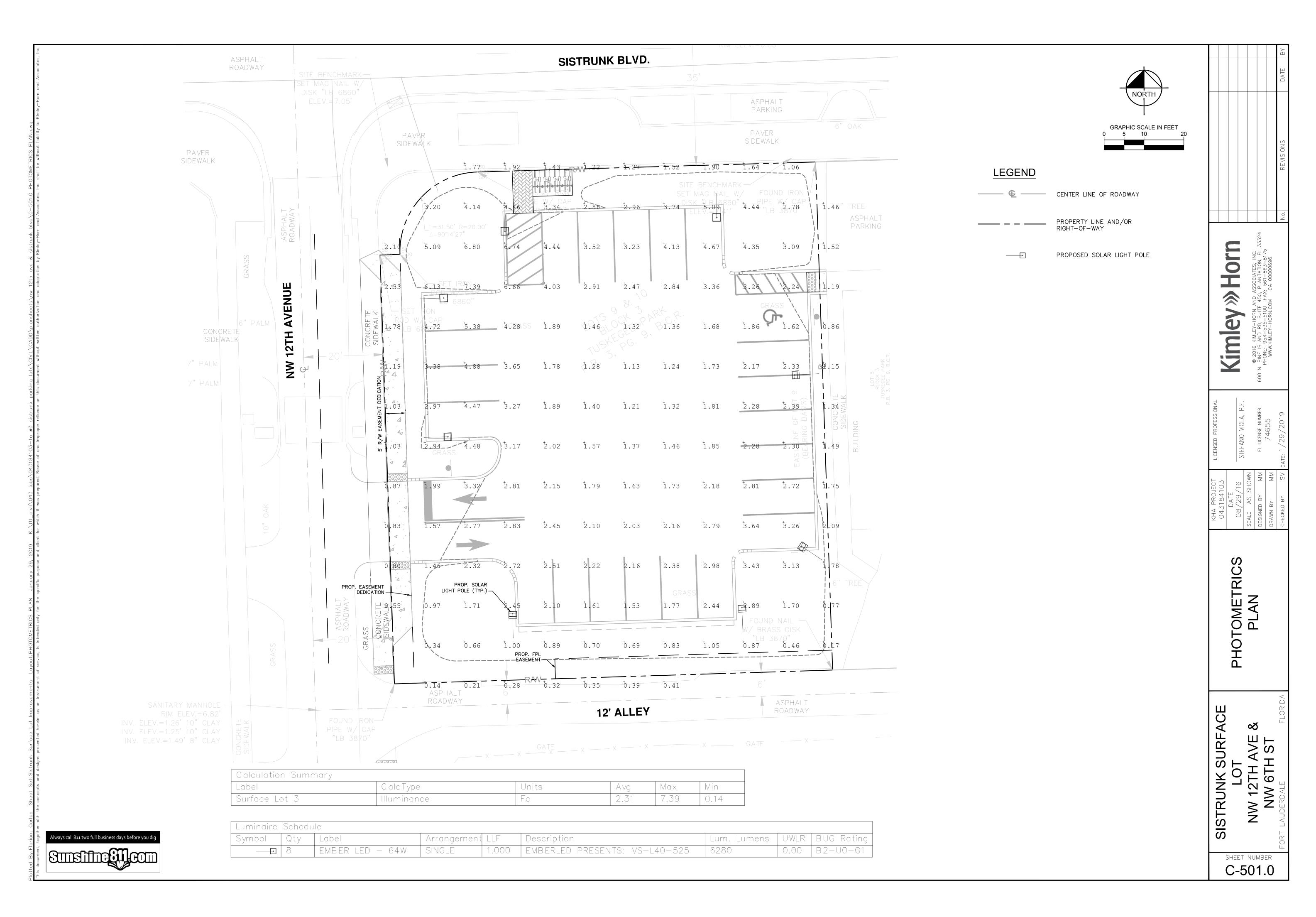
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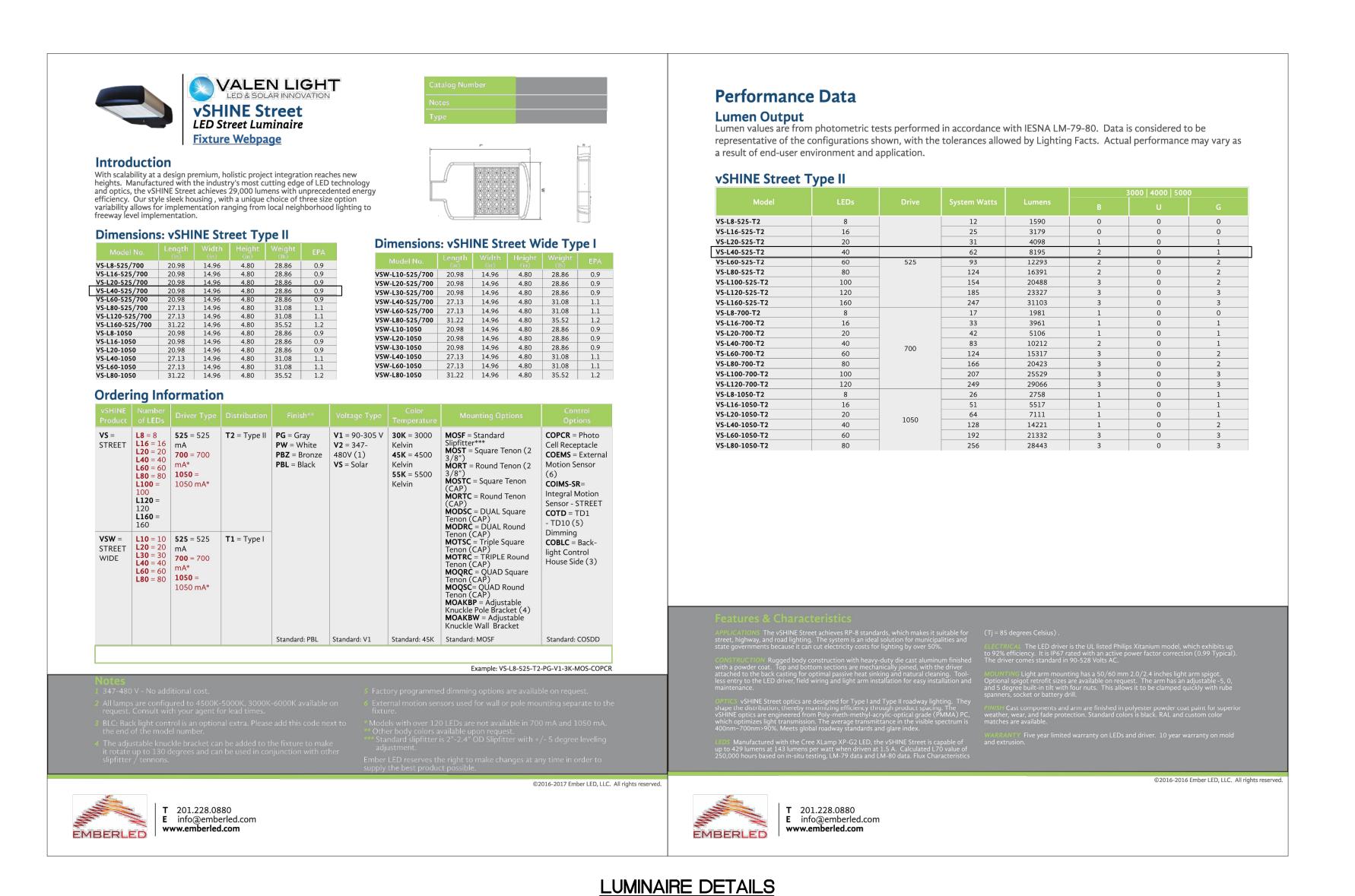
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CAM # 19-0474 Exhibit 1 p. 396 Page 396 of 409 City of Fort Lauderdale

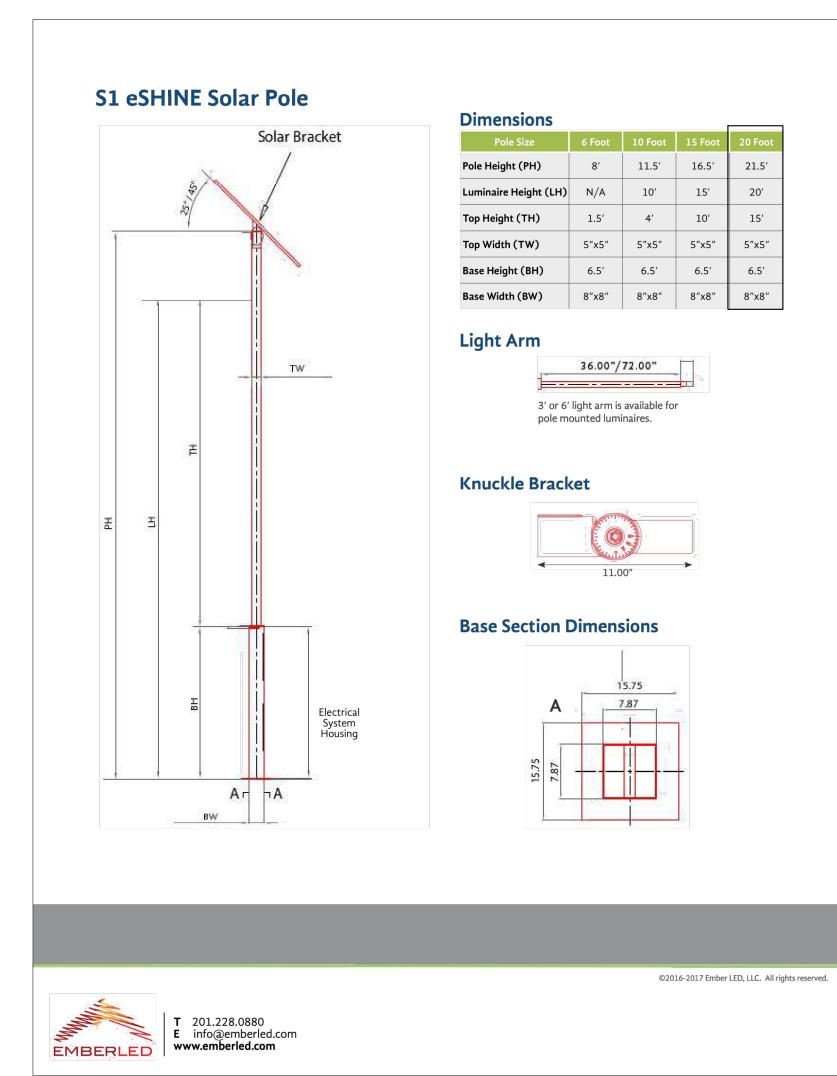
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CAM # 19-0474 Exhibit 1 p. 397 Page 397 of 409



SCALE: N.T.S.



LIGHT POLE DETAILS

SCALE: N.T.S.

SISTRUNK SURFACE
COT
LOT
LOT
NW 12TH AVE &
NW 6TH ST

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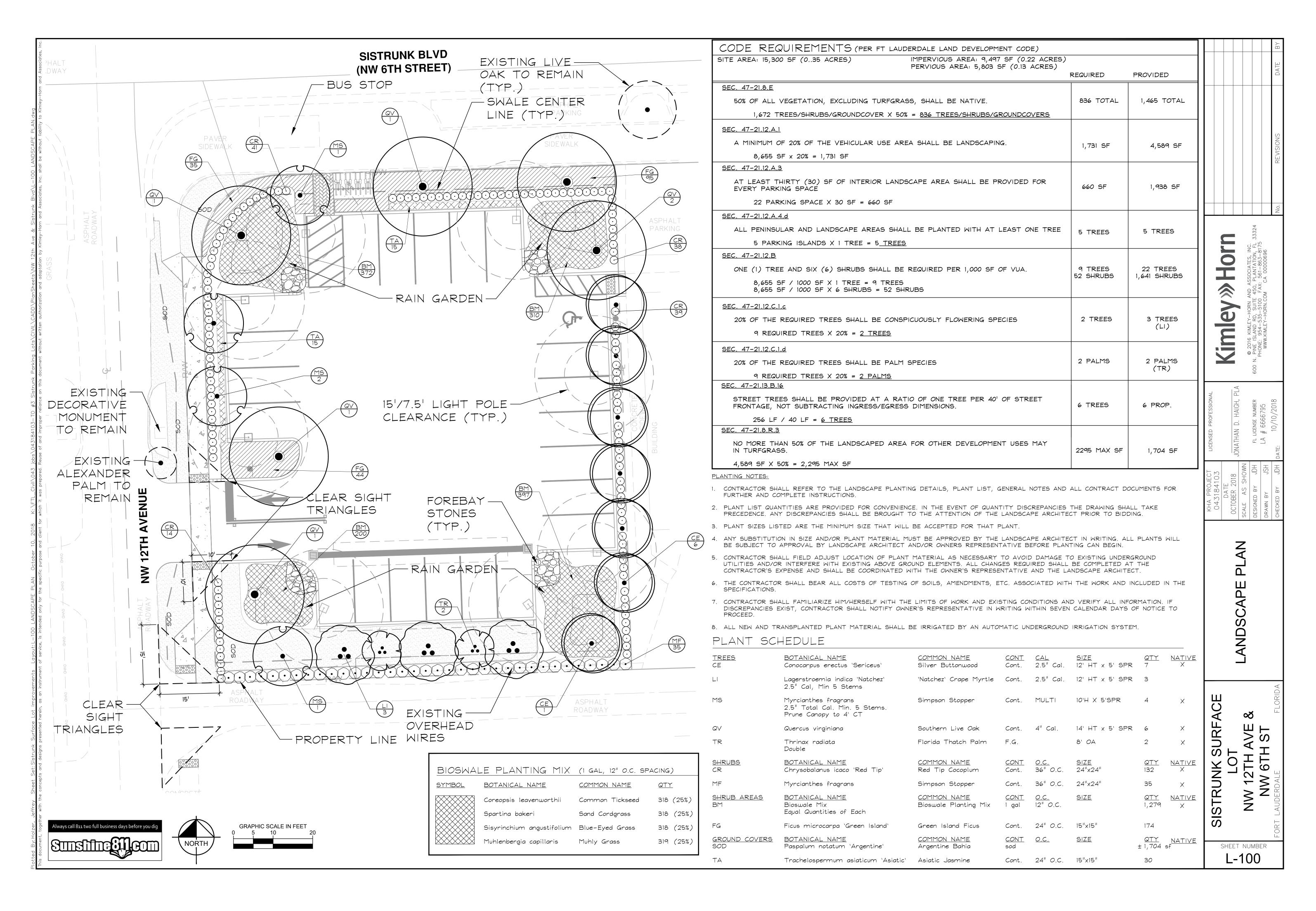
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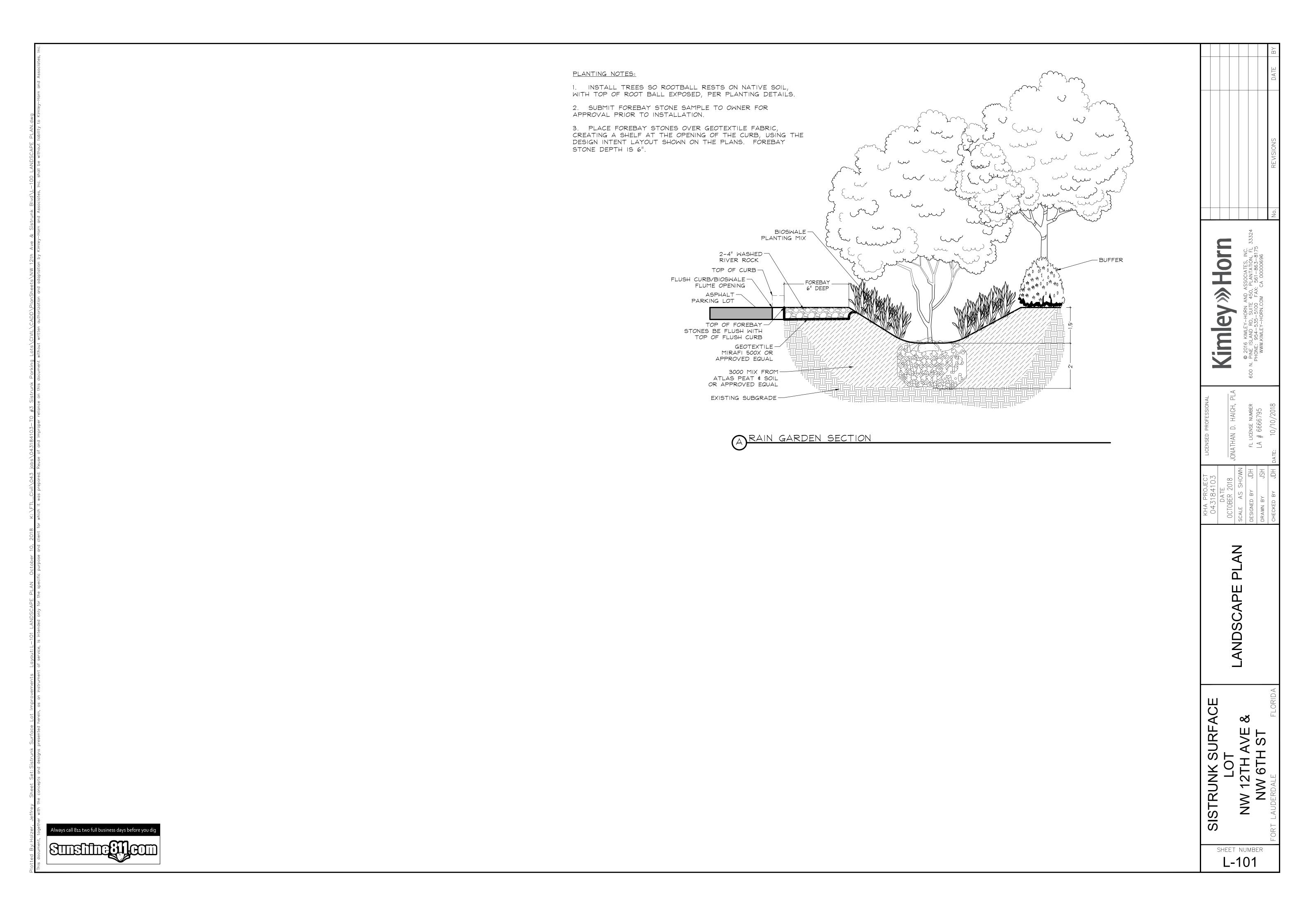
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CAM # 19-0474 Exhibit 1 p. 398 Page 398 of 409

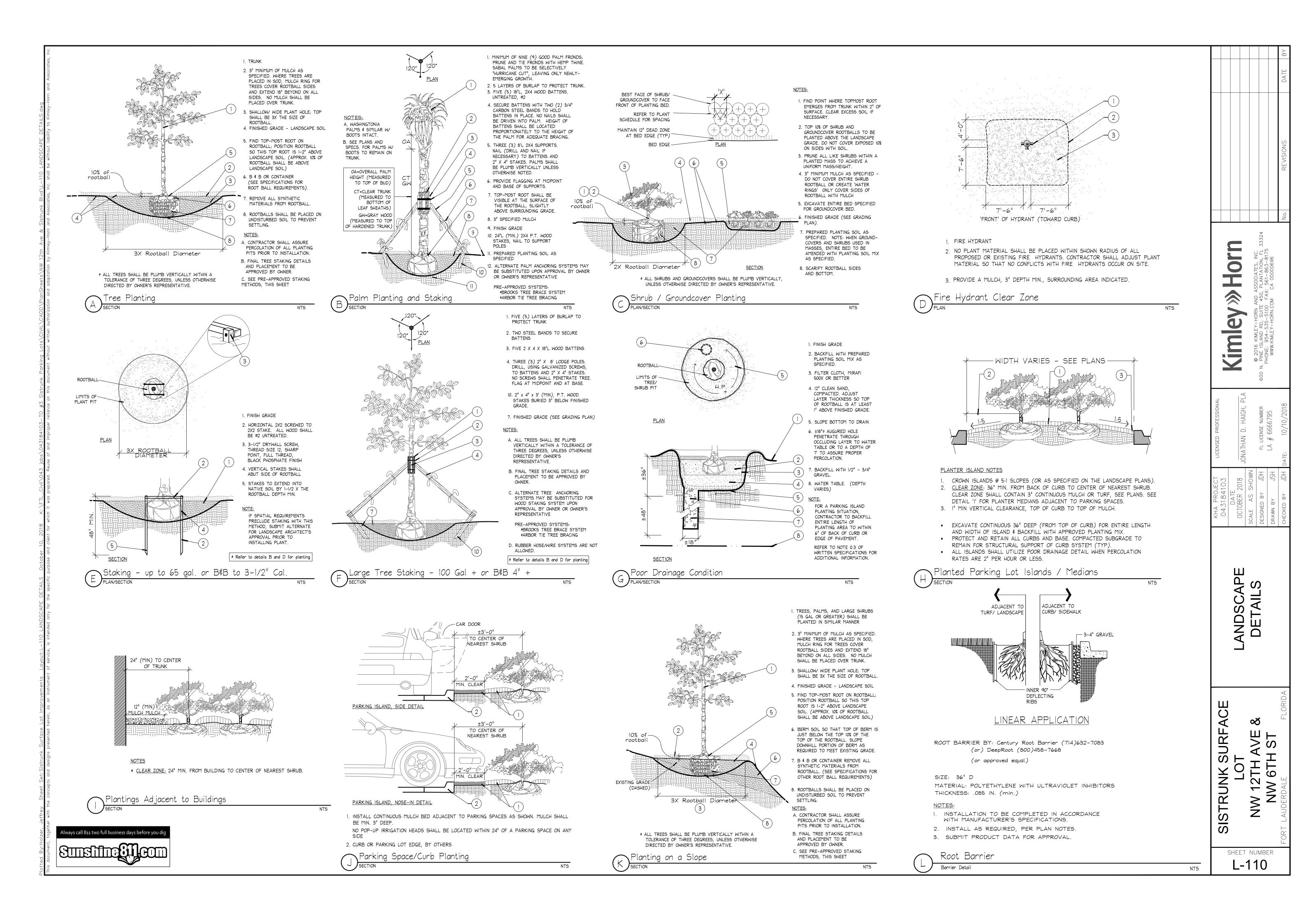
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City of Fort Lauderdale



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GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

- 1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.
- 2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED WHERE HEAT WILL DAMAGE ANY PLANT. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS (\$100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

D. MATERIALS

PLANTS

1 GENERAL

MATERIALS LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL. UPON SUBMITTALS' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MULCH PRODUCT DAT

TOPSOIL MIX AMENDMENT MIX/ PRODUCT DATA/ TEST RESULTS

PHOTOGRAPHS OF ONE (1) OF EACH SPECIES (OR TAGGED IN NURSERY)

CLIENT-REQUESTED TAGGING MAY SUBSTITUTE PHOTOS.
INDICATE SIZES (HEIGHT/WIDTH) AND QUALITY PER SPEC.

FERTILIZER PRODUCT DATA
INNOCULANT PRODUCT DATA

HERBICIDE PRODUCT DATA

STAKING/GUYING FOR ALTERNATE TO DETAILS: SEND PRODUCT DATA, DETAIL

2. PLANT MATERIALS

A. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS.

NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY

STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST

EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.

ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA

DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND,

WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL

HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE

AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY

REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL

FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM

OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN

PERMISSION FROM THE OWNER'S REPRESENTATIVE

B. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

C. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

- 1. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF 20% CLEAN FLORIDA MUCK AND 80% PARTS CLEAN SAND. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
- 2. <u>MUCK</u> (OR MUCKY PEAT) FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, AND OF A VERY HIGH ORGANIC CONTENT DERIVED FROM FLORIDA SOURCES; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
- 3. <u>SAND</u> FOR USE IN PREPARING SOIL MIXTURE SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY THE OWNER.
- 4. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE AT WHICH POINT THE CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION <u>PRIOR TO PLANTING.</u>
- 5. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

F. WATER

ways call 811 two full business days before you dig

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WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER. *WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

*FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF 3 INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). TYPE OF MATERIAL: "FLORIMULCH" OR SHREDDED, STERILE EUCALYPTUS

I. DIGGING AND HANDLING

- 1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
- 2. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.
- 3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH <u>FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS</u>, CURRENT EDITION. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO
- 4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
- 5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB- BASES.

J. CONTAINER GROWN STOCK

- 1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.
- 2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS
- 3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
- 4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE

N. FINE GRADING

- 1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED
- 2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
- 3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES.

O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

- 2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL - 811 - TO LOCATE UTILITIES.
- 3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND ADEQUATE PERCOLATION CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.
- 4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
- 5. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES, METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
- 6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
- 7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACKFILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER PERCOLATION. IF POOR PERCOLATION EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
- 8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.

- 10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
- 11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
- 12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
- 13. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
- 14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" TO ACHEIVE SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
- 15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
- 16. MULCHING: PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS CONTRACT.
- 17. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

P. LAWN SODDING

- 1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
- 2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
- 3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

4. SODDING

- A. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
- B. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.
- C. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED REFER TO DETAILS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
- 5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

6. LAWN MAINTENANCE:

- A. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
- B. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF 90 CALENDAR DAYS COMMENCING AFTER ACCEPTANCE.

S. MAINTENANCE (ALTERNATE BID ITEM)

CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING THE INITIAL 90-DAY MAINTENANCE PERIOD ON A COST-PER-MONTH

T. FINAL INSPECTION AND ACCEPTANCE OF WORK

FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (I) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

U. WARRANTY

- 1. THE LIFE AND SATISFACTORY CONDITION OF ALL 7 GALLON AND LARGER PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
- 2. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
- 3. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER.
- 4. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

KIMLEY-HORN AND ASSOCIATES, INC.

AND RD, SUITE 450, PLANTATION, FL 33324
954-535-5100 FAX: 561-863-8175
KIMLEY-HORN.COM CA 00000696

Bid 12248-193

HAIGH, PLA

© 2016 KIMLEY-HOR

E NUMBER

600 N. PINE ISLAND RD, SU
PHONE: 954-535-51
WWW.KIMLEY-HORN

3 JONATHAN D. HAIGH, OWN
JDH FL LICENSE NUMBER
LA # 6666795

043184103
DATE
0CTOBER 2018
SCALE AS SHOWN
DESIGNED BY JDH
DRAWN BY JSH

LANDSCAPE NOTES

ISTRUNK SURFACE
LOT
NW 12TH AVE &
NW 6TH ST

SHEET NUMBER
L-111

2/4/2019 12:10 PM

CAM # 19-0474 Exhibit 1 p. 402 Page 402 of 409

REFERENCES

A minimum of three (3) references shall be provided:

1.	Company Name:
	Address: 5
	Contact:
	Phone #: Email:
	Contract Value: Year:
	Description:
•	O a mara
2.	Company Name:
	Address:
	Contact:
	Phone #: Email:
	Contract Value: Year:
	Description:
2	Company Name:
J.	Company Name.
	Address:
	Contact:
	Phone #: Email:
	Contract Value: Year: Year:
	Description:
4.	Company Name:
	5
	Address:
	Contact:
	Phone #: Email:
	Contract Value: Year:
	Description:
5.	Company Name:
	Addross
	Address: Contact:
	Phone #: Email:
	Contract Value: Year:
	Description:
	Description.

NON-COLLUSION STATEMENT:

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

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

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

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

- 3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).
- 3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

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

<u>NAME</u>	<u>RELATIONSHIPS</u>	
-		

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.

3

CAM # 19-0474 Exhibit 1 Page 405 of 409

CONSTRUCTION BID CERTIFICATION

<u>Please Note:</u> All fields below must be comple authority from the department of state, in acc			inporation, you may be required to obtain a certificate of
Company: (Legal Registration)			
Address:			
City:	State:	Zip:	
Telephone No. FAX No.	Email:		
Does your firm qualify for MBE or WBE status	: MBE I WBE I		
		nership, state the names of all partners. If a	trade name, state the names of the individuals who d
Name	Title	Name	Title
Name	Title	Name	Name
Addendum No. Date Received	Addendum No. Date Received	Addendum No. Date Received	Addendum No. Date Received
			such variance in the space provided below or reference
submitted unless such is listed and contained	ed in the space provided below. The City of lied that your response is in full compliance	loes not, by virtue of submitting a variance, with this competitive solicitation. If you do r	Iry. No variances will be deemed to be part of the binecessarily accept any variances. If no statement lot have variances, simply mark N/A. If submitting your properties of the part o
submitted unless such is listed and contained contained in the below space, it is hereby imp	ed in the space provided below. The City of lied that your response is in full compliance	loes not, by virtue of submitting a variance, with this competitive solicitation. If you do r	necessarily accept any variances. If no statement
submitted unless such is listed and contained contained in the below space, it is hereby impresponse electronically through BIDSYNC you have below signatory affirms that he has or will below signatory agrees to furnish all labor, to and contract documents at the unit prices indiwith any other bidder or parties to this bid will signatory also hereby agrees, by virtue of st exemplary damages, expenses, or lost profits	ed in the space provided below. The City of solided that your response is in full compliance a must also click the "Take Exception" butto obtain all required permits and licenses from ols, material, equipment and supplies, and to cated if awarded a contract. The below signatsoever. Furthermore, the undersigned gubmitting or attempting to submit a bid, the arising out of this competitive solicitation prothe amount of Five Hundred Dollars (\$500.0)	loes not, by virtue of submitting a variance, with this competitive solicitation. If you do not. In the appropriate agencies, and that his firm o sustain all the expense incurred in doing the latory has not divulged to, discussed, or comparantees the truth and accuracy of all state it in no event shall the City's liability for boocess, including but not limited to public adversariance.	necessarily accept any variances. If no statement
submitted unless such is listed and contained contained in the below space, it is hereby impresponse electronically through BIDSYNC you have below signatory affirms that he has or will below signatory agrees to furnish all labor, to and contract documents at the unit prices indiwith any other bidder or parties to this bid will signatory also hereby agrees, by virtue of st exemplary damages, expenses, or lost profits presentations, or award proceedings exceed	ed in the space provided below. The City of solided that your response is in full compliance a must also click the "Take Exception" butto obtain all required permits and licenses from ols, material, equipment and supplies, and to cated if awarded a contract. The below signatsoever. Furthermore, the undersigned gubmitting or attempting to submit a bid, the arising out of this competitive solicitation prothe amount of Five Hundred Dollars (\$500.0)	loes not, by virtue of submitting a variance, with this competitive solicitation. If you do not. In the appropriate agencies, and that his firm o sustain all the expense incurred in doing the latory has not divulged to, discussed, or comparantees the truth and accuracy of all state it in no event shall the City's liability for boocess, including but not limited to public adversariance.	necessarily accept any variances. If no statement is not have variances, simply mark N/A. If submitting you are submitted to do business in the State of Florida. The work set forth in strict accordance with the bid plan upared this bid with other bidders, and has not collude ements and answers contained in this bid. The beloider's direct, indirect, incidental, consequential, special outsement, bid conferences, site visits, evaluations, or
submitted unless such is listed and contained contained in the below space, it is hereby impresponse electronically through BIDSYNC you have below signatory affirms that he has or will below signatory agrees to furnish all labor, to and contract documents at the unit prices indivith any other bidder or parties to this bid will signatory also hereby agrees, by virtue of sexemplary damages, expenses, or lost profits presentations, or award proceedings exceed protest ordinance contained in this competitive	ed in the space provided below. The City of solided that your response is in full compliance a must also click the "Take Exception" butto obtain all required permits and licenses from ols, material, equipment and supplies, and to cated if awarded a contract. The below signatsoever. Furthermore, the undersigned gubmitting or attempting to submit a bid, the arising out of this competitive solicitation prothe amount of Five Hundred Dollars (\$500.0)	loes not, by virtue of submitting a variance, with this competitive solicitation. If you do not. In the appropriate agencies, and that his firm o sustain all the expense incurred in doing the latory has not divulged to, discussed, or comparantees the truth and accuracy of all state it in no event shall the City's liability for boocess, including but not limited to public adversariance.	necessarily accept any variances. If no statement is not have variances, simply mark N/A. If submitting you are submitted to do business in the State of Florida. The work set forth in strict accordance with the bid plan upared this bid with other bidders, and has not collude ements and answers contained in this bid. The beloider's direct, indirect, incidental, consequential, special outsement, bid conferences, site visits, evaluations, or

Date:

Date:

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

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

Pursuant to City Ordinance Sec. 2-17(a)(i)(ii), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

(a) Contractors doing business with the City shall not discriminate against their employees based on the employee's race, color, religion, gender (including identity or expression), marital status, sexual orientation, national origin, age, disability or any other protected classification as defined by applicable law.

<u>Contracts.</u> Every Contract exceeding \$100,000, or otherwise exempt from this section shall contain language that obligates the Contractor to comply with the applicable provisions of this section.

The Contract shall include provisions for the following:

- The Contractor certifies and represents that it will comply with this section during the entire term of the contract.
- (ii) The failure of the Contractor to comply with this section shall be deemed to be a material breach of the contract, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.

Authorized Signature	Print Name and Title
Date	

CONTRACT PAYMENT METHOD

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City is transitioning from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale, to receive your payment fast and safely. No more waiting for checks to be printed and mailed.

In accordance with Article 7, item 7.6 of the contract, payments on this contract will be made utilizing the City's P-Card. Accordingly, bidders must presently have the ability to accept these credit cards or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

Please indicate with which credit card you prefer to be paid:

□Master Card	
□Visa Card	
Company Name: Signature:	
Print Name Title:	

Question and Answers for Bid #12248-193 - Sistrunk Off-Street Parking Lot at NW 12th Avenue P12166.347

Overall Bid Questions

There are no questions associated with this bid.