

TOWN OF CUTLER BAY

**PUBLIC WORKS DEPARTMENT
INVITATION TO BID
ITB # 17-08**



SW 100 AVENUE STORMWATER RETROFIT PROJECT

BID DUE DATE & TIME
TBA

MANDATORY "PRE-BID" MEETING DATE & TIME:
TBA

**TOWN OF CUTLER BAY
INVITATION TO BID
SW 100 AVENUE STORMWATER RETROFIT PROJECT
ITB # 17-08**

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SECTION 00100
TOWN OF CUTLER BAY
INVITATION TO BID
SW 100 AVENUE STORMWATER RETROFIT PROJECT
ITB # 17-08

The Town of Cutler Bay is requesting bids from qualified proposers to provide a roadway and drainage improvement project for the Town of Cutler Bay. **Interested proposers should visit the Town's website at www.cutlerbay-fl.gov to obtain the Invitation to Bid package. Bid Packages may also be picked up during normal business hours at the office of the Town Clerk, Debra E. Eastman, located at:**

Town of Cutler Bay
10720 Caribbean Blvd., Suite 105
Cutler Bay, FL 33189

Sealed submittals including one (1) original and three (3) copies of the submittals plus a CD containing all documents submitted must be received **no later** than TBA and be clearly marked on the outside, **"ITB # 17-08 SW 100 AVENUE STORMWATER RETROFIT PROJECT", by Debra E. Eastman, Town Clerk, Town of Cutler Bay, 10720 Caribbean Blvd., Suite 105, Cutler Bay, Florida, 33189.** Late submittals and electronic submittals will **not** be accepted.

A MANDATORY "Pre-Bid" Meeting will be held on TBA in the Town Hall Council Chambers, 10720 Caribbean Blvd., Suite # 115, Cutler Bay, Florida 33189.

Pursuant to Town Code, public notice is hereby given that a "Cone of Silence" is imposed concerning the Town's competitive purchasing process, which generally prohibits communications concerning the ITB **from** the time of advertisement of the ITB **until** the Town Council meeting at which the Council considers the Town Manager's recommendation to the Town Council concerning the competitive purchase transaction. Please see the detailed specifications for the public solicitation for services for a statement fully disclosing the requirements of the "Cone of Silence".

Pursuant to Ordinance 06-11; Town Code Chapter 8A; Section 7.6 of the Town Charter, vendors of the Town are required to disclose any campaign contributions to the Town Clerk, and each vendor must do so prior to and as a condition of the award of any Town contract to the vendor. Please see the detailed specifications of this solicitation for further details.

The Town of Cutler Bay reserves the right to accept or reject any and/or all bids or parts of bids, to workshop or negotiate any and all bids, to waive irregularities, and to request re-bids on the required materials or services.

Sincerely,

Rafael G. Casals
Town Manager



SECTION 00200
INSTRUCTIONS TO BIDDERS

1. SEALED BIDS

Sealed bids for furnishing all goods and services necessary to complete the Work specified in these documents will be received at:

Date: TBA

Time: TBA

**Place: Town Hall
10720 Caribbean Blvd., Suite 105
Cutler Bay, Florida 33189**

2. SCHEDULE OF EVENTS

No.	Event	Date*	Time* (EST)
1	Advertisement/Distribution of ITB & Cone of Silence Begins	TBA	TBA
2	<u>Mandatory Pre-Bid Meeting</u> 10720 Caribbean Blvd., Suite 115 Cutler Bay, Florida 33189	TBA	TBA
3	Deadline to Submit Questions	TBA	TBA
4	Deadline to Town Responses to Questions	TBA	TBA
5	Deadline to Submit Bid-Response	TBA	TBA
6	Evaluation of Bid Responses	TBA	TBA
7	Announcement of Selected Contractors/Cone of Silence Ends	TBA	TBA

*The Town reserves the right to change the scheduled dates and time.

3. **DEFINITION OF TERMS** Certain terms used in these documents are defined as follows:

Bid\Proposal	The bid documents submitted by the Bidder.
Bidder/Proposer	Any person, firm or corporation submitting a proposal for the Work covered by these specifications or his duly authorized representative.
Contract	The Contract for Construction to be executed by Contractor and Town for the Work.
Contractor	The person, firm or corporation with whom the Town has executed a contract for the Work.
Days	Shall refer to calendar days.
Responsible Bidder	In order to be considered a “responsible” bidder, the Bidder must possess integrity as well as adequate equipment and personnel to do the Work within the time limits that are established and adequate financial status to meet the obligations to perform the Work. The firm must not have defaulted on a prior contract or been disbarred by any agency.
Responsive Bidder	Any person, firm or corporation submitting a Bid for the Work whose Bid form is complete and includes all required attachments and enclosures, free from exclusions or special conditions and has no alternative Bids for any items, unless alternatives are requested in the specifications.
Town	The Town Council of the Town of Cutler Bay or the Town Manager, if applicable.
Town Engineer	The Town’s general engineering consultant and project manager for this contract.
Work	The services required by the Contract Documents, including labor and materials.

4. **DELIVERY OF BIDS**

All Bids, whether mailed or delivered in person, shall be submitted in a SEALED ENVELOPE bearing on the outside the following project information as well as the name of the Bidder and his address clearly marked:

SW 100 AVENUE STORMWATER RETROFIT PROJECT

Addressed to:

Town of Cutler Bay
Attn: Debra E. Eastman, Town Clerk
10720 Caribbean Blvd., Suite 105
Cutler Bay, Florida 33189

All Bids must be received by the Town no later than **TBA.**

5. BID GUARANTY

A certified or cashier's check drawn on a national or state bank, or bid bond, in the amount of **five percent (5%)** of the Total Bid, shall accompany each bid as a guarantee that the Bidder will, if award is made, execute an Agreement to do the Work for the amount proposed and furnish any required certificates of insurance and bond documents. The bid bond shall be from a surety with an A- rating or better under Best's Guidelines, made payable to: The Town of Cutler Bay.

6. BID FORMS

The Bidder shall submit an original Bid on the bid forms attached to this INVITATION TO BID. The Bidder shall fill in all the blank spaces completely for each and every unit item for which a Bid is tendered. The Bidder shall state the price, typewritten or in ink, for which he proposes to do each item of Work. The Bid shall include: 1) Agreement/Contract; 2) Bid Forms; 3) Certificate or Evidence of Insurance; 4) Bid Guarantee; 5) Qualifications Statement; 6) Sworn Statement on Public Entity Crime Form; 7) Addenda acknowledgement, if applicable; 8) Anti-Kickback Affidavit; 9) Non-Collusive Affidavit; 10) Certification Regarding Debarment, Suspension and other Responsibility Matters; 11) Buy American Certificate of Compliance; 12) Certification Regarding Lobbying; 13) Contractor's Questionnaire; 14) Drug Free Workplace form; and 15) a Corporate Resolution evidencing authorization to submit Bid, if applicable.

7. SIGNATURE ON BID

The Bidder shall sign the Bid as follows: If the Bid is made by an individual, the Bidder's name and address shall be shown. If made by a firm or partnership, the name and address of each member of the firm or partnership shall be shown. If made by a corporation, the person signing the Bid shall show the name of the state under the laws of which the corporation is chartered, also the names and business addresses of its corporate officers. The Bid shall bear the seal of the corporation attested by the secretary. Anyone signing the Bid as agent shall include in the Bid legal evidence of his/her authority to do so.

8. AWARD OF CONTRACT

The award of the agreement will be to the lowest responsive and responsible bidder; whose qualifications indicate the award will be in the best interest of the Town and whose bid complies with the requirements of these specifications. In no case will the award be made until all necessary investigations have been made into the responsibility of the bidder(s) and the Town Manager is satisfied that the bidder is qualified to do the work and have the necessary organization, capital and equipment to carry out the work in the specified timeframes. In evaluating responsibility, the Town may also consider previous contracts with the Town, past performance and experience with other contracts, compatibility of the project team with Town

personnel, and any other criteria deemed relevant by the town.

If the Town accepts a bid, the Town will provide a written notice of award to the lowest responsive and responsible bidder, who meets the requirements of section 1.10.1.

If the successful bidder to whom the Contract is awarded forfeits the Award by failing to meet the conditions of Subsection 14, the Town may, at the Town's sole option, award the agreement to the next lowest Responsive and Responsible bidder or reject all bids or re-advertise the Work.

The Town, at its sole discretion, may consider the lowest and responsive bidder as the bidder who has the lowest bid amount for: SW 100 AVENUE STORMWATER RETROFIT PROJECT.

9. COST OF BIDS

All expenses involved with the preparation and submission of Bids to the Town or any work performed in connection therewith, shall be borne by the Bidder(s). No payment shall be made for any responses received, nor for any other effort required of or made by the Bidder(s) prior to commencement of work as defined by the Agreement duly approved by the Town Council.

10. QUALIFICATION OF BIDDERS

Each Bidder shall submit a completed Qualification Statement utilizing the form attached.

11. RIGHT TO REJECT BIDS

The Town of Cutler Bay reserves the right to accept or reject any and/or all Bids or parts of Bids, to workshop or negotiate any and all Bids, to waive irregularities, and to request re-Bids on the required materials or services.

12. ELIGIBLE BIDDERS

The Town reserves the right, before awarding a Contract, to require a Bidder to submit evidence of his/her qualifications, as may be deemed necessary, and consider any evidence available to it of the financial, technical, and other qualifications and abilities of the bidder. The Contract will be awarded only to a Bidder fully qualified to undertake the proposed work. All material or services must meet all applicable Federal, State and Local specifications and permit requirements. In accordance with 23 CFR 635.112(e), no public agency shall be permitted to bid in competition or to enter into subcontracts with private contractors.

13. RETURN OF THE BID GUARANTY

All Bid Guarantees of unsuccessful Bidders will be returned after the Agreement is awarded and executed.

14. EXECUTION OF CONTRACT

The successful Bidder(s) shall, within ten (10) days of receipt of a written notice of the Award of the Agreement, deliver to the Town a fully executed Agreement and all requested certificates of insurance and bonds.

15. FORFEITURE OF BID GUARANTY FOR FAILURE TO EXECUTE CONTRACT

The failure of the successful Bidder(s) to execute an Agreement and submit required insurance certificates and bonds as specified in Subsection 14 will result in forfeit of the Award. Each Bidder agrees in advance that the Town will sustain certain damages too difficult to accurately ascertain. Accordingly, if the Award is forfeited under this Section, the amount of the Bid Guaranty of the forfeiting Bidder will be retained by the Town, not as forfeiture or a penalty, but as liquidated damages.

16. TIME AND AWARD

The Bidder agrees to abide by the overall and unit prices quoted in the Bid for up to ninety (90) days from the date of bid opening to allow for the Town review, award, and execute the Agreement.

17. INTERPRETATION AND CLARIFICATION

All questions about the meaning or intent of the Bid Documents and specifications shall be directed in writing to the Town Clerk's Office, Debra E. Eastman at 10720 Caribbean Blvd., Suite #105, Cutler Bay, Florida 33189. Interpretation or clarifications considered necessary by the Town in response to such questions will be issued by means of addenda electronically mailed or delivered to all parties that are on record with the Town Clerk as having requested and received the Bid Documents. Provided however that it is each Bidder's sole responsibility to be informed of any changes to the Invitation To Bid in the form of written addenda and the Town shall not be responsible for any Bidder's failure to receive same. The Town has the right to rely on all Bids received and the submittal of a Bid shall represent the Bidder's acknowledgement that he has read and understood the Invitation to Bid and any addenda thereto. Written questions must be received by TBA. Only questions answered by written addenda shall be binding. Oral and other interpretation or clarifications shall be without legal effect.

18. BID MODIFICATIONS

No modifications shall be submitted by Bidder or accepted by the Town.

19. WITHDRAWAL OF A BID

A Bidder may withdraw his Bid at any date and time prior to the time the Bids are scheduled to be opened. Notice of withdrawal should be made in writing to the Town Clerk's Office, Debra E. Eastman, at 10720 Caribbean Blvd., Suite # 105, Cutler Bay, Florida 33189.

20. OPENING OF BIDS

Bids will be publicly opened and read aloud at the appointed time and place stated in the Invitation to Bid/Request for Proposals. Late Bids will not be considered. No responsibility will be attached to any Town Staff for the premature opening of a Bid not properly addressed and identified. Bidders or their authorized agents are invited to be present at the bid opening.

21. PUBLIC ENTITY CRIMES ACT

In accordance with the Public Entity Crimes Act, (Section 287.133, Florida Statutes) a person or affiliate who is a contractor, who had 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 Town, 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 or real property to the Town, 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 the Town in excess of the threshold amount provided in Section 287.917, Florida Statutes, for Category Two for a period of 36 months from the date of being placed on the convicted vendor list. Violation of this section by the Contractor shall result in rejection of the Bid, termination of the contract, and may cause Contractor debarment.

22. TOWN LICENSES, PERMITS AND FEES

In accordance with the Public Bid Disclosure Act, 218.80, Florida Statutes, each license, permit, or fee a Contractor will have to pay the Town before or during the Work or the percentage method or unit method of all licenses, permits and fees required by the Town and payable to the Town by virtue of the Work as part of the Agreement are as follows:

- 22.1 Contractor shall have and maintain during the term of the Agreement all appropriate Town licenses, and fees for which shall be paid in full in accordance with the Town's Fee structure for such licenses. THERE WILL NOT BE ANY PERCENTAGE REDUCTION OR WAIVING OF TOWN LICENSE FEES.
- 22.2 During the performance of the Agreement there may be times when the Contractor will be required to obtain a Town permit for the Work. It is the responsibility of the Contractor to insure that he or she has the appropriate Town permits to perform such Work as may become necessary during the performance of the Agreement. Any fees related to Town required permits in connection with the Agreement will be the responsibility of the Contractor and will not be reimbursed by the Town. Licenses, permits, and fees that may be required by County, State or Federal entities are not included in the above list.

23. INSURANCE

The Bidder shall be required to provide and maintain insurance coverage of such types and amounts as specified in Article 6 ("Contract for Construction") of the Agreement. The Bidder shall include with his or her Bid either Certificates of Insurance evidencing same or documentation from his or her insurer evidencing the insurability of the Bidder to meet the insurance requirements.

24. BONDS

A Performance and a Payment Bond for the entire Grand Total Bid Amount shall be required in connection with this contract.

25. QUALIFICATION OF SURETIES

- A. General: The following requirements shall be met by all surety companies furnishing bid, performance payment or other type of bonds:
- B. Qualifications: As to companies being rated acceptable:
 - 1. The Surety shall be rated as "A" or better as to General Policyholders Rating and Class V or better as to Financial Category by Best's Key

Rating Guide, published by Alfred M. Best Company, Inc., of 75 Fulton Street, New York, New York, 10038.

2. The Surety shall be listed on the U.S. Department of the Treasury, Fiscal Service, Bureau of Government Financial Operations, Circular 570, (1982 Revision) entitled, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies."
 3. All Surety Companies are subject to approval and may be rejected by the Owner without cause, in the same manner that bids may be rejected.
- C. Limitations: Bonding Limits or Bonding Capital refer to the limit or amount of Bond acceptable on any one risk.
1. The bonding limit of the Surety shall not exceed ten percent (10%) of the policyholder surplus (capital and surplus) as listed by the aforementioned Best's Key Rating Guide, on anyone risk (penalty or amount of any one bond).
- D. Requirements:
1. Policy Holders Surplus is required to be 5 times the amount of any one bond.
 2. The Agent countersigning the bond shall be a resident of Miami-Dade County.

26. FAMILIARITY WITH LAWS

The Bidder is assumed to be familiar with all applicable Federal, State, and local laws, ordinances, rules, and regulations that may in any manner affect the Work.

27. EXAMINATION OF BIDDER'S FACILITIES

The Town, as part of its evaluation may perform an examination of the Bidder's facilities. The Town Manager or designee, as part of the evaluation, may perform this examination.

The term facilities as used in this solicitation shall include, but shall not be limited to, all properties operated by the Bidder, all equipment used in the performance of business by the Bidder, and/or any other evidence, tangible or intangible, that the Town may deem necessary to substantiate the technical and other qualifications, and the abilities of the Bidder to perform the Work.

The examination shall include, but shall not be limited to, appearance and cleanliness of facilities, appearance and cleanliness of equipment, "road worthiness" of vehicles, appearance and visibility of all signage on vehicles, and possession and distribution of mandatory equipment. Vehicles shall be examined for compliance with State of Florida Statutes, as well as applicable County and Town Ordinances. Additionally, examination may include verification of some of the (physical) minimum requirements for Bidders. Additionally, the Town reserves the right to perform such examinations on the successful Bidder as often as it deems necessary, to ensure proper

performance of the proposed Agreement.

28. ALLOWANCES

Included in the contract sum is an allocation account for unforeseen conditions, potential construction changes and quantity adjustments, and additional work or materials that the Town may deem necessary if ordered and authorized by the Town in accordance with the Contract Documents.

29. CAMPAIGN FINANCE RESTRICTIONS ON VENDORS

Ordinance 06-11; Town Code Chapter 8A. Pursuant to Ordinance 06-11; Town Code Chapter 8A; Section 7.6 of the Town Charter, vendors of the Town are required to disclose any campaign contributions to the Town Clerk, and each vendor must do so prior to and as a condition of the award of any Town contract to the vendor.

Vendors' Campaign Contribution Disclosure:

1. General requirements:

- A) Any vendor required to disclose campaign contributions pursuant to the Charter of the Town of Cutler Bay, as may be amended, shall file a written disclosure with the Town Clerk, stating all contributions made that were accepted by an elected official of the Town, the official to whom they were made and the date they were made. The Town Clerk may develop a form to be used by vendors for such disclosure.
- B) The disclosure shall be filed prior to and as a condition of the award of any Town contract to the Vendor.
- C) The Town Clerk shall inform the Council of any disclosures which were made in relation to any items before the Council prior to the hearing on the item or prior to the award of the contract.
- D) If an existing vendor makes a contribution the vendor must report the same to the clerk within ten days of its acceptance or prior to being awarded any additional contract or renewal, whichever occurs first.
- E) The Town Clerk shall file a quarterly report with the Council, which lists all the vendor disclosures in the quarter.

2. Disqualification:

- A) As per Section 7.6 of the Town Charter, if a Vendor of products or services who directly or through a member of the person's immediate family or through a political action committee or through any other person makes a campaign contribution to a Town candidate and fails to disclose it then he/she/it shall be barred from selling any product or service to the town for a period of two years following the swearing in of the subject elected official.

30. CONE OF SILENCE

Notwithstanding any other provision of these specifications, the provisions of Town "Cone of Silence" are applicable to this transaction. The entirety of these provisions can be found in the

TOWN OF CUTLER BAY

ITB # 17-08

SW 100 AVENUE STORMWATER RETROFIT PROJECT

Town's Purchasing Ordinance, Town Ordinance 06-22. The "Cone of Silence," as used herein, means a prohibition on any communication regarding a particular Request for Proposal ("RFP"), Request for Qualification ("RFQ") or bid, between:

1. A potential vendor, service provider, proposer, bidder, lobbyist, or consultant; and
2. The Town Council, Town's professional staff including, but not limited to, the Town Manager and his or her staff, any member of the Town's selection or evaluation committee.

The Cone of Silence shall be imposed upon each RFQ, RFP and bid after the advertisement of said RFQ, RFP, or bid. The Cone of Silence shall terminate at the beginning of the Town Council meeting at which time the Town Manager makes his or her written recommendation to the Town Council. However, if the Town Council refers the Manager's recommendation back to the Manager or staff for further review, the Cone of Silence shall be re-imposed until such time as the Manager makes a subsequent written recommendation.

The Cone of Silence shall not apply to:

- a. Oral communications at pre-bid conferences;
- b. Oral presentations before selection or evaluation committees;
- c. Public presentations made to the Town Council during any duly noticed public meeting;
- d. Communication in writing at any time with any Town employee, unless specifically prohibited by the applicable RFQ, RFP or bid documents. The bidder or proposer shall file a copy of any written communication with the Town Clerk. The Town Clerk shall make copies available to any person upon request;
- e. Communications regarding a particular RFQ, RFP or bid between a potential vendor, service provider, proposer, bidder, lobbyist or consultant and the Town's Purchasing Agent or Town employee designated responsible for administering the procurement process for such RFQ, RFP or bid, provided the communication is limited strictly to matters of process or procedure already contained in the corresponding solicitation document;
- f. Communications with the Town Attorney and his or her staff;
- g. Duly noticed site visits to determine the competency of bidders regarding a particular bid during the time period between the opening of bids and the time the Town Manager makes his or her written recommendation;
- h. Any emergency procurement of goods or services pursuant to Town Code;
- i. Responses to the Town's request for clarification or additional information;
- j. Contract negotiations during any duly noticed public meeting;
- k. Communications to enable Town staff to seek and obtain industry comment or perform market research, provided all communications related thereto between a potential vendor, service provider, proposer, bidder, lobbyist, or consultant and any member of the Town's professional staff including, but not limited to, the Town Manager and his or her staff are in writing or are made at a duly noticed public meeting.

Please contact the Town Attorney for any questions concerning Cone of Silence compliance. Violation of the Cone of Silence by a particular bidder or proposer shall render any RFQ award, RFP award or bid award to said bidder or proposer voidable by the Town Council and/or Town Manager.

31. LOBBYIST REGISTRATION

Proposers must also comply with all Town Charter sections and Code provisions that pertain to lobbyists, including Section 7.6 of the Town Charter and implementing ordinance(s), including Sec. 2-11(s) of the Town Code and Ordinance 07-02. Please contact the Town Clerk at (305) 234-4262 for additional information.

32. PROTEST PROCEDURES

With respect to a protest of the terms, conditions, and specifications contained in a solicitation (RFP, RFQ, or Bid), including any provisions governing the methods for ranking bids, proposals, or replies, awarding contracts, reserving rights of further negotiation, or modifying or amending any contract, the notice of protest shall be filed in accordance with Town Ordinance 06-22.

33. TERM OF CONTRACT

If awarded, the initial work order will be substantially completed within _____ calendar days after the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions within _____ calendar days after the date when the Contract Time commences to run. The Town will allow extended daily working hours and work on weekends with advance notice.

CONTRACT PERIOD/PRICES SHALL BE FIXED AND FIRM FOR THE TERM OF THE CONTRACT

END OF SECTION

SECTION 00300

**PROPOSAL
SW 100 AVENUE STORMWATER RETROFIT PROJECT
TOWN OF CUTLER BAY**

Town Clerk's Office
Town of Cutler Bay
10720 Caribbean Boulevard
Suite 105
Cutler Bay, Florida 33189

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Proposal, as principal or principals, is or are named herein and that no other person than herein mentioned has any interest in the Proposal of the Contract to which the work pertains; that this Proposal is made without connection or arrangement with any other person, company, or parties making a bid or proposal and that the Proposal is in all respects fair and made in good faith without collusion or fraud.

The Bidder certifies that the bidder is not a nonresident alien, or a foreign corporation/entity formed under the laws of a country other than the United States.

The Bidder further declares that he has examined the site of the work and that from personal knowledge and experience, or that he has made sufficient observations of the conditions of the proposed Project Site to satisfy himself that such site is a correct and suitable one for this work and he assumes full responsibility therefore, that he has examined the Drawings and Specifications for the work and from his own experience or from professional advice that the Drawings, including bid item quantities, and Specifications are sufficient for the work to be done and he has examined the other Contractual Documents relating thereto, including the Notice of Bid Invitation, Instructions to Bidders, Proposal, Contract, General Conditions, Supplementary Conditions, Special Conditions, Technical Specifications, Drawings and has read all addenda prior to the receipt of bids, and that he has satisfied himself fully, relative to all matters and conditions with respect to the work to which this Proposal pertains.

The Bidder proposes and agrees, if this Proposal is accepted, to contract with the Town of Cutler Bay (Owner), in the form of contract specified, to furnish all necessary materials, all equipment, all necessary machinery, tools, apparatus, means of transportation, and labor necessary to complete the work specified in the Proposal and the Contract, and called for by the Drawings and Specifications and in the manner specified.

NOTE: THIS SCHEDULE OF BID ITEMS IS MERELY ILLUSTRATIVE OF THE MINIMUM AMOUNT/QUANTITY OF WORK TO BE PERFORMED UNDER THE CONTRACT. IN THE CASE OF ANY CONFLICT BETWEEN THIS SCHEDULE OF BID ITEMS AND THE DETAILED SPECIFICATIONS, THE DETAILED SPECIFICATIONS WILL PREVAIL.

The Bidder further proposes and agrees to comply in all respects with the time limits for commencement and completion of the work as stated in the Contract Form.

The Bidder further agrees that the deductions for liquidated damages, as stated in the Contract Form, constitute fixed, agreed, and liquidated damages to reimburse the Owner for additional costs to the Owner resulting from the work not being completed within the time limit stated in the Contract Form.

Payment Bonds each in the amount of one-hundred percent of the Contract price, within ten (10) consecutive calendar days after written notice being given by the Owner of the award of the Contract, and the undersigned agrees that in case of failure on his part to execute the said Contract and Performance and Payment Bonds within the ten (10) consecutive calendar days after the award of the Contract, the cashier's check or Bid Bond accompanying his bid and the money payable thereon shall be paid to the Owner as liquidation of damages sustained by the Owner; otherwise, the check accompanying the Proposal shall be returned to the undersigned after the Contract is signed and the Performance and Payment Bonds are filed.

Bidders Certificate of Competency No. _____

Bidders Occupational License No. _____

Acknowledgment is hereby made of the following Addenda received since issuance of the Project Manual:

Addendum No. ____ Dated: _____ Addendum No. ____ Dated: _____

Addendum No. ____ Dated: _____ Addendum No. ____ Dated: _____

Addendum No. ____ Dated: _____ Addendum No. ____ Dated: _____

Attached hereto is a cashier's check on the _____
_____ Bank of _____
_____ or Bid Bond for the sum of _____
_____ Dollars
(\$ _____), made payable to the Town of Cutler Bay, Florida.

(Name of Bidder) (Affix Seal) L.S.

Signature of Officer L.S.

(Title of Officer) L.S.

Address: _____

City: _____ State: _____

The full names and residences of persons and firms interested in the foregoing bid, as principals, are as follows:

Name of the executive who will give personal attention to the work:

LIST OF MAJOR SUB-CONTRACTORS

Bidders are required to list with the Proposal, on this sheet all major sub-contractors included for the prosecution of the work. Failure to complete the list may be cause for declaring the Proposal irregular.

The successful bidder shall employ the sub-contractors listed hereunder for the class of work indicated, which list shall not be modified in any way without the written consent of the Town of Cutler Bay.

The Bidder expressly agrees that:

1. If awarded a contract as a result of this proposal, the major sub-contractors used in the prosecution of the work will be those listed below.
2. The Bidder represents that the sub-contractors listed below are financially responsible and are qualified to do the work required.

CATEGORY OF CLASS	NAME OF SUB-CONTRACTOR	ADDRESS OF WORK

END OF SECTION

[SPACE LEFT INTENTIONALLY BLANK]

**TOWN OF CUTLER BAY
SW 100 AVENUE STORMWATER RETROFIT PROJECT
ITB # 17-08**

BID FORM

The following Bid Proposal is presented to assist the Town in evaluating the Bid. The Bid Amounts will include all items described in the Bid Documents (Detailed Specifications). Payment shall be made on the basis of Work actually performed and completed.

The Base Bid Amount includes all work on the following roadway sections:

- SW 100th Avenue from Broad Channel Drive to SW 186th Street/Quail Roost Drive.

BASE BID AMOUNT \$ _____

BASE BID AMOUNT (IN WORDS) _____

Taxpayer Identification Number:

BIDDER:

(Company Name)

(Signature of Authorized Representative)

(Printed Name and Title)

(Company Address)

(Company Phone Number)

BASE BID FORM

The following Base Bid Form is presented to assist the Town in evaluating the Bid. This Base Bid Form reflects estimated quantities for the Base Bid roadway sections as described above. After award, the Town reserves the right to modify estimated quantities subject to the unit price, and eliminate line items if necessary. In the event of discrepancy or approved quantity change, the Unit Price for each item will govern. Payment shall be made for the items listed on the Bid Form on the basis of the Work actually performed and completed.

BID ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	VALUE
101-1	MOBILIZATION	1	LS	\$	\$
102-1	MAINTENANCE OF TRAFFIC	1	LS	\$	\$
104-10-3	SEDIMENT BARRIER	3000	LF	\$	\$
104-18	INLET PROTECTION SYSTEM	16	EA	\$	\$
107-1	LITTER REMOVAL DISPOSAL	0.55	AC	\$	\$
107-2	MOWING	0.20	AC	\$	\$
110-1-1	CLEARING & GRUBBING	1	LS	\$	\$
120-1	REGULAR EXCAVATION	467.7	CY	\$	\$
120-6	EMBANKMENT	65.2	CY	\$	\$
160-4	TYPE B STABILIZATION	1668	SY	\$	\$
162-1-11	PREPARED SOIL LAYER, FINISH SOIL LAYER, 6"	109	SY	\$	\$
285-706	OPTIONAL BASE, BASE GROUP 06	1603	SY	\$	\$
327-70-1	MILLING EXIST ASPH PAVT 1 " AVG DEPTH	6227	SY	\$	\$
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	395.6	TN	\$	\$
337-7-73	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-9.5, PG 76-22	386.3	TN	\$	\$
425-1-203	INLETS, CURB, TYPE 9, J BOT, <10'	6	EA	\$	\$
425-1-441	INLETS, CURB, TYPE J-4, <10'	6	EA	\$	\$
425-2-71	MANHOLES, J-7, <10'	4	EA	\$	\$
430-174-118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" SD	985	LF	\$	\$
430-174-124	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" SD	89	LF	\$	\$
443-70-3	FRENCH DRAIN, 18"	1115	LF	\$	\$
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,189	LF	\$	\$
520-2-4	CONCRETE CURB, TYPE D	58	LF	\$	\$
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	1893	SY	\$	\$
527-2	DETECTABLE WARNINGS	40	SF	\$	\$
570-1-2	PERFORMANCE TURF, SOD	980	SY	\$	\$
700-1-11	SINGLE POST SIGN, F & I, GROUND MOUNT, (LESS THAN 12 SQ. FT.)	30	AS	\$	\$
700-1-60	SINGLE POST SIGN, REMOVE	4	AS	\$	\$
710-90	PAINTED PAVEMENT MARKINGS – FINAL SURFACE	1	LS	\$	\$
711-11-123	THERMOPLASTIC, STD., WHITE, SOLID, CROSSWALK, 12"	306	LF	\$	\$
711-11-124	THERMOPLASTIC, STD., WHITE, SOLID, DIAG. /CHEVRONS, 18"	262	LF	\$	\$
711-11-125	THERMOPLASTIC, STD., WHITE, SOLID, STOP LINE, 24"	54	LF	\$	\$
711-11-170	THERMOPLASTIC, STD., WHITE, ARROW (RIGHT)	3	EA	\$	\$
711 -11-170	THERMOPLASTIC, STD., WHITE, ARROW (LEFT)	19	EA	\$	\$
711 -11-224	THERMOPLASTIC, STD., YELLOW, SOLID, DIAG. /CHEVRONS, 18"	65	LF	\$	\$
711 -14-125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	187	LF	\$	\$
711 -16-101	THERMOPLASTIC, STD., OTHER, WHITE, SOLID, 6"	0.552	GM	\$	\$
711-16-102	THERMOPLASTIC, STD., OTHER, WHITE, SOLID, 8"	0.109	GM	\$	\$
711 -16-201	THERMOPLASTIC, STD., OTHER, YELLOW, SOLID, 6"	0.570	GM	\$	\$
711 -16-231	THERMOPLASTIC, STD., OTHER, YELLOW, SKIP, 6" (10/30)	0.421	GM	\$	\$
0999-25	CONTINGENCY	1	LS	\$75,000	\$75,000

BASE BID AMOUNT \$ _____

BASE BID AMOUNT (IN WORDS) _____

Bid Item Notes:

1. Bid Item 101-1 is a lump sum pay item for all mobilization costs. Includes the construction of two (2) project signs that shall be displayed at each approach to the work zone of the project area. The intent is that the signs will be freestanding. The sign shall display on both sides the project name, Town Logo, elected officials, engineer, and contact information. Shop drawings must be submitted for approval prior to ordering the projects signs. Photos of the actual project signs must be submitted for approval prior to installation of the project signs.
2. Bid Item 102-1 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 crosswalks shall be maintained throughout the project. Includes all work zone signs, channelizing devices and portable changeable message signs. Includes the total shown on the Signing and Pavement Markings Tabulation of Quantities for painted pavement markings used for Maintenance of Traffic.
3. Bid Item 110-1-1 is a lump sum pay item that includes the cost of removal and disposal of all existing asphalt pavement required to complete the design intent of the plans within the entire project site. Includes cost of sawcutting as required for the project.
4. Bid Item 520-1-10 includes the cost of drop curb as shown in the plans. Includes the sawcutting of the existing Type F curb and gutter.

Abbreviation	Unit of Measure	Precision
AC	Acre	0.01
AS	Assembly*	1
CF	Cubic Foot	0.1
CY	Cubic Yard	0.1
DA	Day	1
EA	Each	1
ED	Each Day	1
GA	Gallon	1
GM	Gross Mile	0.001
HR	Hour	1
LB	Pound	1
LF	Linear Foot	1
LO	Location	1
LS	Lump Sum	1
LU	Luminaire*	1
MB	Board Measure/Thousand Feet	0.1
MH	Man-hour**	1
MI	Mile	1
PI	Per Intersection*	1
PS	Per Set*	1
SF	Square Foot	1
SY	Square Yard	1
TN	Ton	0.1
YD	Yard	1

NON-COLLUSION AFFIDAVIT

STATE OF _____
COUNTY OF _____

_____ (“Affiant”), being first duly sworn, deposes and says that:

1. Affiant is _____ of _____, (the “Bidder”) and has submitted the attached Bid;
2. Affiant has personal knowledge of the matters set forth herein and is competent to testify;
3. Affiant is fully informed respecting the preparation and contents of the attached Bid and all pertinent circumstances respecting the Bid;
4. The Bid is genuine and is not a collusive or sham Bid;
5. Neither the Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including Affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm, or person to submit a collusive or sham Bid, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit, or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Town of Cutler Bay or any person interested in the proposed Contract.

By: _____

(Corporate Seal)

Title: _____

Subscribed and sworn before me this ___ day of _____, 2017, by _____, who is personally known to me or has produced _____ as identification.

Notary Public

Print Name

My commission expires:

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
AND OTHER RESPONSIBILITY MATTERS**

PRIMARY COVERED TRANSACTIONS

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Signature: _____ Project Name: _____

Name: _____ Project Number: _____

Firm/Agency: _____

Street Address: _____

CFR 24.510 & 24 CFR, Part 24, Appendix A

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms “covered transaction,” “debarred,” “suspended,” “ineligible,” “lower tier covered transaction,” “participant,” “person,” “primary covered transaction,” “principal,” “proposal,” and “voluntarily excluded,” as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled “Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-Lower Tier Covered Transactions,” without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Non-procurement List (Telephone Number).

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntary excluded from participation in this transaction, in addition to other remedies available to the federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

Appendix A – 49 CFR Part 20

The undersigned (Contractor) certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form—LLL, “Disclosure Form to Report Lobbying”, in accordance with the instructions {as amended by “Government Wide Guidance for New Restrictions on Lobbying”, 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*)}
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. {{Note: Pursuant to 31 U.S.C. § 1352©(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure}}.

The Contractor, _____, certified or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date _____

[SPACE LEFT INTENTIONALLY BLANK]

ANTI-KICKBACK AFFIDAVIT

STATE OF FLORIDA)
) SS:
COUNTY OF MIAMI-DADE)

I, the undersigned, hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the Town of Cutler Bay, its elected officials, and _____ or its design consultants, as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

By: _____

Title: _____

Sworn and subscribed before this

_____ day of _____, 2017

Notary Public, State of Florida

(Printed Name)

My commission expires: _____

[SPACE LEFT INTENTIONALLY BLANK]

SWORN STATEMENT ON PUBLIC ENTITY CRIMES
SECTION 287.133(3)(a), FLORIDA STATUTES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to the Town of Cutler Bay

by _____

[Print individual's name and title]

for _____

[Print name of entity submitting sworn statement]

whose business address is

and (if applicable) its Federal Employer Identification Number (FEIN) is _____

(If the entity has no FEIN, include the Social Security Number of the individual

signing this sworn statement: _____)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)9g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or the United States, including, but not limited to, any bid or contract for goods and services to be provided to any public entity or an agency or political subdivision of any other state or of the United States involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction or a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand than an “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
- a. A predecessor or successor of a person convicted of a public entity crime; or
 - b. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm’s length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
5. I understand that a “person” as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term “person” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an entity.
6. Based on information and belief, the statement that I have marked below is true in relation to the entity submitting this sworn statement. **[Indicate which statement applies.]**
- ___ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, not any affiliate of the entity, has been charged with and convicted of a public entity crime subsequent to July 1, 1989.
- ___ This entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.
- ___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. **[Attach a copy of the final order]**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND HAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Signature of Entity Submitting Sworn Statement

Sworn to and subscribed before me this _____ day of _____, 2017.

Personally known _____

OR produced identification _____ Notary Public – State of _____

(type of identification) My commission expires _____

(Printed, typed or stamped Commissioned name notary public)

[SPACE LEFT INTENTIONALLY BLANK]

DRUG-FREE WORKPLACE FORM

The undersigned vendor in accordance with Section 287.087, Florida Statutes, hereby certifies that _____ does:

(Name of Business)

- 1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- 2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
- 4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
- 5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- 6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Proposers Signature

Date

END OF SECTION

SECTION 00350

**CONTRACTOR'S QUESTIONNAIRE
QUALIFICATION STATEMENT**

Submitted to: The Mayor and Town Council of the Town of Cutler Bay, Florida:

By _____

Principal Office _____

How many years has your organization been in business as a General Contractor under your present business name? _____

Does your organization have current occupational licenses entitling it to do the work contemplated in this Contract? _____

State of Florida Occupational License (State type and number):

Federal I.D. No: _____

Dade County Certificate of Competency (State type and number):

Town of Cutler Bay Occupational License (State type and number):

Please include copies of above licenses and certifications with proposal.

How many years of experience in similar work has your organization had?

- (A) As a General Contractor _____
- (B) As a Sub-Contractor _____
- (C) What contracts has your organization completed? State below:

Contract Amount	Class of Work	When Completed	Name & Address of Owner

How many years has your organization, or your sub-contractor, had in the actual construction of roadway and drainage improvements?

_____ Years

List the detailed experience below:

<u>Name & tel. number of Owner</u>	<u>Project Name</u>	<u>Date completed</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Are you a Certified Disadvantaged Business Enterprise (DBE) with the State of Florida?

Have you ever failed to complete any work awarded to you? _____

If so, where and why? _____

Has any officer or partner of your organization ever failed to complete a contract handled in his own name? _____

If so, state name of individual, name of owner, and reason thereof:

In what other lines of business are you financially interested or engaged?

Give references as to experience, ability and financial standing.

What equipment do you own that is available for the proposed work and where is it located?

Financial Statement: _____

What Bank or Banks have you arranged to do business with during the course of the Contract should it be awarded to you? _____

I hereby certify that the above answers are true and correct.

(Affix Seal)

Name of Bidder: _____

Signature of Officer: _____

Title of Officer: _____

END OF SECTION

SECTION 00410

BID BOND

STATE OF FLORIDA)

ss

COUNTY OF)

KNOW ALL MEN BY THESE PRESENTS, that _____

_____ as Principal, and

_____, as Surety, a

Corporation chartered and existing under the laws of the State of _____, with its

principal offices in the City of _____, and authorized to do business in the State of

Florida are held and firmly bound unto the Owner, _____ in

the penal sum of _____ Dollars (\$.)

lawful money of the United States, for the payment of which sum will and truly to be made, we

bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by

these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted

the accompanying bid, dated _____, 2017, for:

**SW 100 AVENUE STORMWATER RETROFIT PROJECT
TOWN OF CUTLER BAY, FLORIDA**

NOW, THEREFORE:

- A. If the principal shall not withdraw said bid within sixty (60) days after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to him for signature, enter into a written contract with the Owner in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and effect.

TOWN OF CUTLER BAY

ITB # 17-08

SW 100 AVENUE STORMWATER RETROFIT PROJECT

B. In the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds within the time specified, if the principal shall pay the Owner the difference between the amount specified in said bid and the amount for which the Owner may procure the required work and supplies, if the latter amount be in excess of the former, then the above obligations shall be void and of no effect, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals, this ____ day of _____, A.D., 2017, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESSES: (If Sole Ownership or Partnership, two (2) witnesses required)
(If Corporation, Secretary Only will attest and affix seal)

WITNESSES:

PRINCIPAL:

Name of Firm

Signature of Authorized (Affix Seal)

Title

Business Address

City, State & Zip Code

WITNESSES:

SURETY:

Corporate Surety

Attorney-in-Fact (Affix Seal)

Business Address

City, State & Zip Code

Name of Local Insurance Agency

SECTION 00500

SW 100 AVENUE STORMWATER RETROFIT PROJECT

CONTRACT FOR CONSTRUCTION

THIS IS A CONTRACT FOR CONSTRUCTION (“Contract”), by and between TOWN OF CUTLER BAY, FLORIDA, a Florida municipal corporation, (hereinafter referred to as "Town"), and _____, a Florida corporation (hereinafter referred to as "Contractor".)

WITNESSETH, that Contractor and Town, for the considerations hereinafter named, agree as follows:

ARTICLE 1

SCOPE OF WORK

- 1.1 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents.

The Work is generally described as follows:

Provide labor and equipment required to construct roadway and drainage improvements on SW 100th Avenue from Broad Channel Drive to SW 186th Street/Quail Roost Drive in the Town of Cutler Bay. Work shall include but not be limited to the installation of raised medians, curb and gutter, sidewalk, curb ramps, stabilized subgrade, limerock base, asphalt, drainage inlets and manholes, French drain installation, signing and pavement markings, utility adjustments, and sodding restoration. Utilization of these services will require close coordination with the Town and Engineer.

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

SW 100 AVENUE STORMWATER RETROFIT PROJECT

ARTICLE 2

CONTRACT TIME

- 2.1 If awarded, the initial work order will be substantially completed within _____ calendar days after the date when the Contract Time commences to run as provided in paragraph 2.03

of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions within _____ calendar days after the date when the Contract Time commences to run. The Town will allow extended daily working hours and work on weekends with advance notice.

CONTRACT PERIOD/PRICES SHALL BE FIXED AND FIRM FOR THE TERM OF THE CONTRACT

- 2.2 Contractor shall be instructed to commence each phase or work order of the Work, or any portion of the Work, by written instruction and as specified in the form of one or more Notices to Proceed issued by the Town Manager or his designee. Contractor acknowledges and agrees that the Town shall have no obligation to issue any Notice(s) to Proceed for the Work or any portion thereof. Each Notice to Proceed issued by the Town will provide for a commencement date for the Work, or portion thereof, and required completion dates for the Work or portion thereof, including Substantial Completion and Final Completion Dates. A Notice to Proceed will not be issued until Contractor's submission to Town of all required documents and after execution of this Contract.
- 2.3 Time is of the essence throughout this Contract. The Work, or any portion thereof, shall not commence until the date specified in the Notice(s) to Proceed. The Work or any portion thereof shall achieve Substantial Completion and Final Completion within the number of days specified in the relevant Notice(s) to Proceed. The Contractor shall prosecute all Work with faithfulness and diligence and the Work shall be completed and ready for final payment in accordance with the Contract Documents and as certified by Town's Engineer.
- 2.4 Upon failure of Contractor to substantially complete the Contract within the specified period of time, Contractor shall pay to Town the sum of One Thousand Dollars (\$1,000.00) for each calendar day after the time specified in the Notice(s) to Proceed for Substantial Completion. After Substantial Completion, should Contractor fail to complete the remaining Work within the time specified in the Notice to Proceed for final completion and readiness for final payment, Contractor shall pay to Town the sum of Five Hundred Dollars (\$500.00) for each calendar day after the time specified for completion and readiness for final payment. These amounts are not penalties but are liquidated damages to Town for its inability to obtain full beneficial occupancy and use of the Project.

Liquidated damages are hereby fixed and agreed upon between the parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by Town as a consequence of such delay, and both parties desiring to obviate any question or dispute concerning the amount of said damages and the cost and effect of the failure of Contractor to complete the Work and the Contract on time. The above-stated liquidated damages shall apply separately to each phase of the Project for which a time for substantial and/or final completion is given pursuant to a Notice(s) To Proceed.

- 2.5 Town is authorized to deduct the liquidated damages from monies due to Contractor for the Work under this Contract. In the event that the amount of liquidated damages due the Town by Contractor exceed payment or monies due the Contractor from the Town, Contractor

shall be liable and shall immediately upon demand by Town make payment to the Town in the amount of said excess.

ARTICLE 3

CONTRACT PRICE

- 3.1 Town shall pay to Contractor for the performance of the Work or any portion thereof completed for the month based on the Unit Pricing set forth in Contractor's bid or proposal, which Unit Pricing is incorporated herein in the Bid Form, subject to the conditions, limitations and restrictions of Sections 3.4 herein and in accordance with the "Standard General Conditions" included in ITB No. 17-08. The unit price shall be full compensation for all costs, including overhead and profit, associated with completion of the Work or any portion thereof as authorized by Notice(s) To Proceed and in full conformity with the requirements as stated or shown, or both, in the Plans and Specifications.
- 3.2 The sum set forth in Paragraph 3.1 shall constitute the Contract Price which shall not be modified except by a Change Order issued by Town or as otherwise specified herein.
- 3.3 The Contract Price may be adjusted by the Town pursuant to Article 12 of the General Conditions.
- 3.4 Town and Contractor agree that this Contract, and any Work authorized pursuant to this Contract, shall be subject to the condition precedents that Town funds and/or Miami-Dade County surtax transportation funds are available, appropriated annually and budgeted for the accomplishment of the Work or any portion thereof for this Project, and that the Town secures and obtains any necessary loans for the accomplishment of this Project pursuant to a borrowing enabling ordinance and any loan implementing resolution adopted by the Town Council and as described in the Town Council Resolution which awards and authorizes the execution of this Contract.
- 3.5 Town shall make progress payments on the basis of Work completed and Contractor's Applications for Payment on or before twenty (20) days after receipt of the Pay Application and in the manner set forth in Article 14 of the General Conditions of the Contract Documents. Rejection of a Pay Application by the Town shall be within twenty (20) days after receipt of the Pay Application. Any rejection shall specify the applicable deficiency and necessary corrective action. Any undisputed portion shall be paid as specified above. All such payments will be made in accordance with the Schedule of Values established in the Contract Documents or, in the event there is no Schedule of Values, for Work completed and as otherwise provided in the Contract Documents. In the event the Contract Documents do not provide a Schedule of Values or other payment schedule, Applications for Payment shall be submitted monthly by Contractor on or before the 10th of each month for the prior month. Progress payments shall be made in an amount equal to the percentage of Work completed, but, in each case, less the aggregate of payments previously made and less such amounts as Town shall determine or Town may withhold taking into account the

aggregate of payments made and the percentage of Project completion in accordance with the Contract Documents and Schedule of Value, if any. The Contractor agrees that ten percent (10%) of the amount due for each progress payment or Pay Application (the "Retainage") shall be retained by Town until final completion and acceptance of the Work by Town. In the event there is a dispute between Contractor and Town concerning a Pay Application, dispute resolution procedures shall be conducted by Town commencing within 45 days of receipt of the disputed Payment Application. The Town shall reach a conclusion within 15 days thereafter and promptly notify Contractor of the outcome, including payment, if applicable.

- 3.6 Each Pay Application shall include an affidavit or partial release or waiver of lien by Contractor indicating that partial payments received from Town for the Work have been applied by Contractor to discharge in full all of Contractor's obligations, including payments to subcontractors and material suppliers.
- 3.7 The payment of any Application for Payment by Town, including the final request for payment, does not constitute approval or acceptance by Town of any item of the Work reflected in such Application for Payment, nor shall it be construed as a waiver of any of the Town's rights hereunder or at law or in equity.

ARTICLE 4

CONTRACT DOCUMENTS

- 4.1 The Contract Documents which comprise the entire agreement between the Town and the Contractor concerning the Work consist of this Contract for Construction (including any Change Orders or Amendments hereto), the Drawings, Plans and Specifications approved by the Town, the Supplementary Technical Specifications, the Special Conditions, the General Conditions, the Invitation for Bids and bidding documents issued by the Town and any Addenda issued thereto, the Contractor's Bid or Proposal, the Performance Bond and Payment Bond, Insurance Certificates, the Notice of Award, the Notice(s) to Proceed, and any other Contract Documents, not specifically listed herein and included in the Project Manual which shall be considered incorporated into and made a part of this Contract by this reference and shall govern this Project.

Contractor is reminded and hereby recognizes that all Work under this Contract must comply with all applicable federal, State, Miami-Dade County and Town laws and regulations.

Any mandatory clauses which are required by such federal or other governmental regulations shall be deemed to be automatically incorporated herein. In the event of any conflict among the foregoing Contract Documents, the documents shall govern in the order listed and/or as determined by the Town Engineer.

- 4.2 This document incorporates and includes all prior negotiations, correspondence,

conversations, agreements, or understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements, or understandings concerning the subject matter of these Contract Documents that are not contained herein. Accordingly it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

- 4.3 The Contract Documents shall remain the property of the Town. The Contractor shall have the right to keep one record set of the Contract Documents upon completion of the Project; provided; however, that in no event shall the Contractor use, or permit to be used, any or all of such Contract Documents on other Projects without the Town's prior written authorization.

ARTICLE 5

INDEMNIFICATION

- 5.1 The parties agree that 1% of the total compensation paid to the Contractor for the performance of this Contract shall represent the specific consideration for the Contractor's indemnification of the Town as set forth in this Section and in the Contract Documents.
- 5.2 To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Town and its officials, consultants, agents and employees from and against all demands, claims, suits, liabilities, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of attorneys and other professionals and court costs through appeal) arising out of, related to, or resulting from the performance or non-performance of the Work, or Contractor's obligations or the Work under this Contract, including but not limited to any such claim, damage, loss or expense that is attributable to bodily injury, sickness, disease or death sustained by any person, or to injury to or destruction of tangible property or any other property (other than the Work itself) including the loss of use resulting therefrom, caused in whole or in part by any willful and wanton or negligent or gross negligent acts or omission of Contractor, any subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by applicable law and regardless of the negligence of any such party.
- 5.3 In any and all claims against the Town or any of its officers, consultants, agents or employees by any employee of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under the above paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers or workman's compensation acts, disability benefit acts or other employee benefit acts.

- 5.4 It is the specific intent of the parties hereto that the foregoing indemnification shall comply with Section 725.06 (Chapter 725), Florida Statutes. It is further the specific intent and agreement of the parties that all of the Contract Documents for this Project are hereby amended to include the foregoing indemnification and the "Specific Consideration" therefore.
- 5.5 Notwithstanding any obligation which may be set forth or required in the Contract Documents, the Town shall not indemnify or hold harmless the Contractor or any Subcontractor, Engineer, or any officer, director, partner, employee, agents, consultant of each or any of them from any claims, costs, losses or damages arising out of any Work performed or this Contract, and any reference or inclusion of such indemnification by the Town or Owner in the Contract Documents is hereby deleted. The parties acknowledge and agree that the Town is a municipal corporation that enjoys sovereign immunity pursuant to applicable law, and shall not and does not waive any rights and protections pursuant to such sovereign immunity.

ARTICLE 6

INSURANCE AND BONDS

- 6.1 **Insurance.** Contractor shall secure and maintain throughout the duration of this Contract insurance of such types and in such amounts as listed in the Contract Documents, including and in no event less the policies, coverages and minimum limits specified below and as satisfactory to Town, naming the Town as an Additional Insured, underwritten by a firm rated A-X or better by Bests Rating and qualified to do business in the State of Florida. Certificates of Insurance shall be provided to the Town, reflecting the Town as an Additional Insured, no later than ten (10) days after award of this Contract and prior to the execution of this Contract by Town and prior to commencing any Work. Each certificate shall include no less than (30) thirty-day advance written notice to Town prior to cancellation, termination, or material alteration of said policies or insurance. The insurance coverage shall be primary insurance with respect to the Town, its officials, employees, agents and volunteers naming the Town as additional insured. Any insurance maintained by the Town shall be in excess of the Contractor's insurance and shall not contribute to the Contractor's insurance. The insurance coverages shall include at a minimum the amounts set forth in this Section 6.1.

- a. Commercial General Liability coverage with limits of liability of not less than a \$1,000,000 per Occurrence combined single limit for Bodily Injury and Property Damage.
This Liability Insurance shall also include Completed Operations and Product Liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor. The General Aggregate Liability limit (except for Products/Completed Operations) shall be in the amount of \$1,000,000.

- b. Workers Compensation and Employer's Liability insurance, to apply for all employees for statutory limits as required by applicable State and Federal laws. The policy(ies) must include Employer's Liability with minimum limits of \$1,000,000.00 each accident. No employee, subcontractor or agent of the Contractor shall be allowed to provide Work pursuant to this Contract who is not covered by Worker's Compensation insurance.
- c. Business Automobile Liability with minimum limits of \$1,000,000 per Occurrence combined single limit for Bodily Injury and Property Damage. Coverage must be afforded on a form no more restrictive than the latest edition of the Business Automobile Liability policy, without restrictive endorsements, as filed by the Insurance Services Office, and must include Owned, Hired, and Non-Owned Vehicles.
- d. Builder's Risk property insurance upon the entire Work to the full replacement cost value thereof. This insurance shall include the interest of Town and Contractor and shall provide All-Risk coverage against loss by physical damage including, but not limited to, Fire, Extended Coverage, Theft, Vandalism and Malicious Mischief.
- e. Contractor acknowledges that it shall bear the full risk of loss for any portion of the Work damaged, destroyed, lost or stolen until Final Completion has been achieved for the Project, and all such Work shall be fully restored by the Contractor, at its sole cost and expense, in accordance with the Contract Documents.
- f. **Certificate of Insurance.** On or before the Effective Date of this Contract, the Contractor shall provide the Town with Certificates of Insurance for all required policies. The Contractor shall be responsible for assuring that the insurance certificates required by this Section remain in full force and effect for the duration of this Contract, including any extensions or renewals that may be granted by the Town.
The Certificates of Insurance shall not only name the types of policy(ies) provided, but also shall refer specifically to this Contract and shall state that such insurance is as required by this Contract. The Town reserves the right to inspect and return a certified copy of such policies, upon written request by the Town.
If a policy is due to expire prior to the completion of the Work, renewal Certificates of Insurance shall be furnished thirty (30) calendar days prior to the date of their policy expiration. Each policy certificate shall be endorsed with a provision that not less than thirty (30) calendar days' written notice shall be provided to the Town before any policy or coverage is cancelled or restricted. Acceptance of the Certificate(s) is subject to approval of the Town.
- g. **Additional Insured.** The Town is to be specifically included as an Additional Insured for the liability of the Town resulting from Work performed by or on behalf of the Contractor in performance of this Contract. The Contractor's insurance, including that applicable to the Town as an Additional Insured, shall apply on a

primary basis and any other insurance maintained by the Town shall be in excess of and shall not contribute to the Contractor's insurance.

The Contractor's insurance shall contain a severability of interest provision providing that, except with respect to the total limits of liability, the insurance shall apply to each Insured or Additional Insured (for applicable policies) in the same manner as if separate policies had been issued to each.

- h. **Deductibles.** All deductibles or self-insured retentions must be declared to and be reasonably approved by the Town. The Contractor shall be responsible for the payment of any deductible or self-insured retention in the event of any claim.
- i. The provisions of this section shall survive termination of this Contract.

6.2 **Bonds.** Prior to performing any portion of the Work and within three (3) days of the Effective Date hereof, the Contractor shall deliver to Town the Bonds required to be provided by Contractor hereunder. (The bonds referenced in this Section are collectively referred to herein as the "Bonds"). Pursuant to and in accordance with Section 255.05, Florida Statutes, the Contractor shall obtain and thereafter at all times during the performance of the Work maintain a separate performance bond and labor and material payment bond for the Work, in the amount of the entire Grand Total Bid Amount in the form provided in the Contract Documents or in other form satisfactory to and approved in writing by Town and executed by a surety of recognized standing with a rating of A or better for bonds up to Two Million Dollars. The surety providing such Bonds must be licensed, authorized and admitted to do business in the State of Florida and must be listed in the Federal Register (Dept. of Treasury, Circular 570). The cost of the premiums for such Bonds is included in the Contract Price. If notice of any change affecting the Scope of the Work, the Contract Price, Contract Time or any of the provisions of the Contract Documents is required by the provisions of any bond to be given to a surety, the giving of any such notice shall be Contractor's sole responsibility, and the amount of each applicable bond shall be adjusted accordingly. If the surety is declared bankrupt or becomes insolvent or its right to do business in Florida is terminated or it ceases to meet applicable law or regulations, the Contractor shall, within five (5) days of any such event, substitute another bond (or Bonds as applicable) and surety, all of which must be satisfactory to Town.

6.3 Notwithstanding any obligation which may be set forth or required in the Contract Documents, the Town shall not be required to procure or maintain any insurance in connection with the Work or this Contract, including but not limited to Owner's Liability Insurance or Property Insurance.

ARTICLE 7

CONTRACTOR'S REPRESENTATIONS AND WARRANTIES

In order to induce the Town to enter into this Contract, the Contractor makes the following representations and warranties:

- 7.1 Contractor represents and warrants the following to the Town:
- 7.1.1 Contractor has examined and carefully studied the Contract Documents and the other data identified in the bidding documents, including, without limitation, the “technical specifications and data” and plans and specifications.
 - 7.1.2 Contractor has visited the Project site and become familiar with and is satisfied as to the general and local conditions and site conditions that may affect cost, progress, performance or furnishing of the Work.
 - 7.1.3 Contractor is familiar with and is satisfied as to all federal, state and local laws, regulations and permits that may affect cost, progress, performance and furnishing of the Work. Contractor agrees that it will at all times comply with all requirements of the foregoing laws, regulations and permits.
 - 7.1.4 Contractor has made, or caused to be made, examinations, investigations, tests and/or studies as necessary to determine surface and subsurface conditions at or on the Project site. Contractor acknowledges that the Town does not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to underground or ground facilities at, contiguous or near the Project sites or for existing improvements at or near the sites. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and underground facilities and improvements) at, contiguous or near to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents.
 - 7.1.5 Contractor is aware of the general nature of Work to be performed by the Town and others at the site that relates to the Work as indicated in the Contract Documents.
 - 7.1.6 Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Project site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
 - 7.1.7 Contractor has given Town written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Town is acceptable to Contractor, and the Contract

Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

7.1.8 The Contractor agrees and represents that it possesses the requisite skills to perform the Work and that the Work shall be executed in a good and workmanlike manner, free from defects, and that all materials shall be new and approved by or acceptable to Town, except as otherwise expressly provided for in the Contract Documents. The Contractor shall cause all materials and other parts of the Work to be readily available as and when required or needed for or in connection with the construction, furnishing and equipping of the Project.

7.2 Contractor further warrants the following:

7.2.1 **Anti-Discrimination:** Contractor agrees that it will not discriminate against any employees or applicants for employment or against persons for any other benefit or service under this Contract because of race, color, religion, sex, national origin, or physical or mental handicap where the handicap does not affect the ability of an individual to perform in a position of employment, and agrees to abide by all federal and state laws regarding non-discrimination.

7.2.2 **Anti-Kickback:** Contractor warrants that no person has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, and that no employee or officer of the Town has any interest, financially or otherwise, in the Project.

For breach or violation of this warranty, the Town shall have the right to annul this Contract without liability or, in its discretion, to deduct from the Contract Price or consideration, the full amount of such commission, percentage, brokerage or contingent fee.

7.2.3 **Licensing and Permits:** Contractor warrants that it shall have, prior to commencement of Work under this Contract and at all times during said Work, all required licenses and permits whether federal, state, County or Town. Contractor acknowledges that it is the obligation of Contractor to obtain all licenses and permits required for this Project.

ARTICLE 8

DEFAULT AND TERMINATION

8.1 If Contractor fails to timely begin the Work, or fails to perform the Work with sufficient workers and equipment or with sufficient materials to insure the prompt completion of the Work within the Contract Time as specified in Article 2 and the Notice(s) to Proceed, 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 the

Contractor shall fail to perform any material term set forth in the Contract Documents, or if Contractor shall become insolvent or be declared bankrupt, or commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors, or from any other cause whatsoever shall not carry on the Work in an acceptable manner, Town may, upon seven (7) days written Notice of Termination, terminate the services of Contractor, exclude Contractor from the Project site, provide for alternate prosecution of the Work, appropriate or use any or all materials and equipment on the Project site as may be suitable and acceptable, and may finish the Work by whatever methods it may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Project is completed. All damages, costs and charges incurred by Town, together with the costs of completing the Project, shall be deducted from any monies due or which may become due to Contractor. In case the damages and expenses so incurred by Town shall exceed monies due Contractor from Town, Contractor shall be liable and shall pay to Town the amount of said excess promptly upon demand therefore by Town. In the event it is adjudicated that Town was not entitled to terminate the Contract as described hereunder for default, the Contract shall automatically be deemed terminated by Town for convenience as described below.

- 8.2 This Contract may be terminated by the Town for convenience upon seven (7) calendar days' written notice to the Contractor, including but not limited to if the Town has determined that such cancellation will be in the best interest of the Town for its own convenience or funding is not available, appropriated or budgeted.

In the event the Contract is terminated for the Town's convenience, the Contractor shall incur no further obligations in connection with the Project and shall, to the extent possible, terminate any outstanding subcontractor obligations, and will be paid for Work performed to the satisfaction of the Town and provided as of the termination date. No consideration will be given for anticipated lost revenue, overhead, mobilization or demobilization or the canceled portions of the Contract. In such event, the Contractor shall promptly submit to the Town its Application for Payment for final payment which shall comply with the provisions of the Contract Documents.

- 8.3 In the event of a default by the Contractor, the Contractor shall also be liable for all damages caused by its default which damages may include, but not be limited to, any and all costs incurred by the Town in completing the Project, and damages arising out of the Contractor's failure to adhere to the Contract requirements and all attorney's fees and costs incurred by the Town in seeking legal relief for the default.

ARTICLE 9

ASSIGNMENT

Neither party shall assign the Contract, any portion of the Work, or any sub-contract, in whole or in part, without the written consent of the other, nor shall Contractor assign any monies due or to become due to it hereunder, without the previous written consent of the Town Manager.

ARTICLE 10

MISCELLANEOUS

10.1 Contractor to Check Plans, Specifications and Data:

Contractor shall verify all dimensions, quantities and details shown on the Plans, Specifications or other data received from Town's Engineer, and shall notify Town's Project Engineer in writing of all errors, omissions and discrepancies found therein within three (3) calendar days of discovery and Town's Project Engineer will promptly review the same. Any Work done after such discovery, but prior to written authorization of the Town's Project Engineer, will be done at the Contractor's sole risk.

10.2 Contractor's Responsibility for Damages and Accidents:

10.2.1 Contractor shall accept full responsibility for the Work against all loss or damage of any nature sustained until final acceptance by Town, and shall promptly repair any damage done from any cause.

10.2.2 Contractor shall be responsible for all materials, equipment and supplies pertaining to the Project.

In the event any such materials, equipment and supplies are lost, stolen, damaged or destroyed prior to final acceptance by Town, Contractor shall replace same without cost to Town.

10.3 Defective Work/Guarantee:

10.3.1 Town shall have the authority to reject or disapprove Work which the Town finds to be defective. If required by the Town, Contractor shall promptly either correct all defective Work or remove such defective Work and replace it with non-defective Work.

Contractor shall bear all direct, indirect and consequential costs of such removal or corrections including cost of testing laboratories and personnel.

10.3.2 Should Contractor fail or refuse to remove or correct any defective Work or to make any necessary repairs in accordance with the requirements of the Contract Documents within the time indicated in writing by Town's Project Engineer, Town shall have the authority to cause the defective Work to be removed or corrected, or make such repairs as may be necessary at Contractor's expense. Any expense incurred by Town in making such removals, corrections or repairs, shall be paid for out of any monies due or which may become due to Contractor. In the event of failure of Contractor to make all necessary repairs promptly and fully, Town may declare Contractor in default.

10.3.3 Contractor shall unconditionally guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. If, within one (1) year after the date of Substantial Completion, any of the Work is found to be defective or not in accordance with the Contract Documents, Contractor, after receipt of written notice from Town, shall promptly correct such defective or nonconforming Work within the time specified by Town without cost to Town. Nothing contained herein shall be construed to establish a period of limitation with respect to any other obligation which Contractor might have under the Contract Documents including but not limited to any claim regarding latent defects.

10.3.4 Failure to reject any defective Work or material shall not in any way prevent later rejection when such defect is discovered.

10.4 **Legal Restrictions and Traffic Provisions:**

Contractor shall conform to and obey all applicable laws, regulations, or ordinances with regard to labor employed, hours of Work and Contractor's general operations. Contractor shall conduct its operations so as not to interfere with or close any thoroughfare, except as provided for in the Contract Documents, without the written consent of the Town or governing jurisdiction.

10.5 **Examination and Retention of Contractor's Records.**

10.5.1 Contractor shall comply with the applicable provisions of Chapter 119, Florida Statutes (Public Records Law).

Contractor shall retain all records associated with this Contract for a period of three (3) years from the date of final payment for all Work performed pursuant to this Contract. The Town or any of their duly authorized representatives shall, until three (3) years after final payment under this Contract, have access to and the right to examine any of the Contractor's books, ledgers, documents, papers, or other records involving transactions related to this Contract for the purpose of making audits, examinations, excerpts, and transcriptions.

10.5.2 Contractor agrees to include in first-tier subcontracts under this Contract a clause substantially the same as subparagraph 10.5.1 above. "Subcontract," as used in this clause, excludes purchase orders not exceeding \$10,000.

10.5.3 The right to access and examination of records in subparagraph 10.5.1 shall continue until disposition of any mediation, claims, litigation or appeals.

10.6 **No Damages for Delay.**

No claim for damages or any claim, other than for an extension of time shall be made or asserted against Town by reason of any delays. Contractor shall not be entitled to an increase in the Contract Price or payment or compensation of any kind from Town for direct, indirect,

consequential, impact or other costs, expenses or damages, including but not limited to, costs of acceleration or inefficiency, arising because of delay, disruption, interference or hindrance from any cause whatsoever, whether such delay, disruption, interference or hindrance be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable. Contractor shall be entitled only to extensions of the Contract Time as the sole and exclusive remedy for such resulting delay. Notwithstanding the above, and in accordance with the requirements of the Contract Documents, the Contractor shall be granted an extension of time and suspension of liquidated damages for any delay beyond the control of the Contractor. Should any delay, disruption, interference or hindrance be caused by the Town, for a continuous period or cumulative period of thirty (30) days, the Contractor may terminate the Contract upon ten (10) days written notice to the Town.

10.7 **Public Entity Crimes Affidavit.**

Contractor shall comply with Section 287.133, Florida Statutes, (Public Entity Crimes Statute) notification of which is hereby incorporated herein by reference, including execution of any required affidavit.

10.8 **Independent Contractor.**

The Contractor is an independent contractor under the Contract. This Contract does not create any partnership or joint venture between the Town and Contractor. Work performed or provided by the Contractor shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the Town.

Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures, applicable to Work rendered under the Contract shall be those of the Contractor.

10.9 **Payment to Sub-Contractors.**

Certification of Payment to Subcontractors: The term “subcontractor”, as used herein, includes persons or firms furnishing materials or equipment incorporated into the Work or stockpiled for which the Town made partial payment and firms working under equipment-rental agreements. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts before the Town will make a further progress (partial) payment. The Contractor shall also return all retainage withheld to the subcontractors within 30 days after the subcontractor’s work is satisfactorily complete, as determined by the Town.

Within 30 days of the Contractor’s receipt of progress payments or any other payments thereafter, except the final payment, the Contractor shall pay all subcontractors and suppliers having an interest in the Contract for all Work completed and materials furnished. The Town will honor an exception to the above when the Contractor demonstrates good cause for not making any required payment within said 30-day period.

10.10 DBE Contract Assurance.

Contractor, or any subcontractor performing Work under this Contract, shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. Contractor shall carry out all applicable requirements of 49 CFE Part 26 in the award and administration of this Contract. 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 Town deems appropriate.

10.11 Governing Law.

This Contract shall be construed in accordance with and governed by the laws of the State of Florida. Venue for any litigation arising out of this Contract shall be proper exclusively in Miami-Dade County, Florida.

10.12 Waiver of Jury Trial.

Town and Contractor knowingly, irrevocably, voluntarily and intentionally waive any right either may have to a trial by jury in State and or Federal court proceedings in respect to any action, proceeding, lawsuit or counterclaim based upon this Contract, arising out of, under, or in connection with the Work, or any course of conduct, course of dealing, statements or actions or inactions of any party.

10.13 Public Records Law

- a. Contractor agrees to keep and maintain public records in CONTRACTOR's possession or control in connection with CONTRACTOR's performance under this Agreement. CONTRACTOR additionally agrees to comply specifically with the provisions of Section 119.0701, Florida Statutes. CONTRACTOR shall 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 Agreement, and following completion of the Agreement until the records are transferred to the TOWN.
- b. Upon request from the TOWN's custodian of public records, CONTRACTOR shall provide the TOWN 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 by Chapter 119, Florida Statutes, or as otherwise provided by law.
- c. Unless otherwise provided by law, any and all records, including but not limited to reports, surveys, and other data and documents provided or created in connection with this Agreement are and shall remain the property of the TOWN.
- d. Upon completion of this Agreement or in the event of termination by either party, any and all public records relating to the Agreement in the possession of the CONTRACTOR shall be delivered by the CONTRACTOR to the TOWN MANAGER, at no cost to the TOWN, within seven (7) days. All such records stored electronically by CONTRACTOR shall be delivered to the TOWN in a format that is compatible with the TOWN's information technology systems. Once the public records have been delivered upon completion or

termination of this Agreement, the CONTRACTOR shall destroy any and all duplicate public records that are exempt or confidential and exempt from public records disclosure requirements.

- e. Any compensation due to CONTRACTOR shall be withheld until all records are received as provided herein.
- f. CONTRACTOR's failure or refusal to comply with the provisions of this section shall result in the immediate termination of this Agreement by the TOWN.

Section 119.0701(2)(a), Florida Statutes

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.

Custodian of Records: Debra E. Eastman, Town Clerk

**Mailing address: 10720 Caribbean Boulevard
Suite 105
Cutler Bay, FL 33189**

Telephone number: (305) 234-4262

Email: deastman@cutlerbay-fl.gov

10.14 **Notices.**

Any notices required by this Contract shall be in writing and shall be deemed to have been properly given if transmitted by hand-delivery, by registered or certified mail with postage prepaid return receipt requested, or by a private postal service, addressed to the parties (or their successors) at the following addresses:

For the Town: Town of Cutler Bay
Town Manager
10720 Caribbean Blvd., Suite 105
Cutler Bay, Florida 33189

With a copy to: Town Attorney, Town of Cutler Bay
Weiss Serota Helfman
Pastoriza Cole & Boniske, P.L.
2525 Ponce de Leon Blvd.
Coral Gables, Florida 33134

For The Contractor: _____

10.15 Prevailing Party; Attorneys' Fees.

In the event of any controversy, claim, dispute or litigation between the parties arising from or relating to this Contract (including, but not limited to, the enforcement of any indemnity provisions), the prevailing party shall be entitled to recover reasonable costs, expenses and attorneys' fees including, but not limited to, court costs and other expenses through all appellate levels.

10.16 Severability.

If any term or provision of this Contract or the Contract Documents shall be held or deemed invalid or unenforceable by the courts or otherwise, illegal or in conflict with any law of the State, the validity of the remaining terms or provisions of this Contract or the Contract Documents shall not be affected thereby, and shall continue in full force and effect, and be enforced to the fullest extent permitted by law.

IN WITNESS WHEREOF, the parties hereto have made and executed this Contract on the respective dates under each signature: TOWN OF CUTLER BAY, FLORIDA, signing by and through its Town Manager, and _____(Contractor) signing by and through _____, duly authorized to execute same.

ATTEST:

TOWN OF CUTLER BAY, FLORIDA,
A Florida municipal corporation

By: _____
Debra E. Eastman, Town Clerk

By: _____
Rafael G. Casals, Town Manager

Date Executed: _____

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY:

Resolution No.: _____

By: _____
Town Attorney

CONTRACTOR MUST EXECUTE THIS CONTRACT AS INDICATED BELOW. USE CORPORATION FORMAT, AS APPLICABLE.

CONTRACTOR:

ATTEST:

(Secretary)

By: _____
(Signature and Title)

(Corporate Seal)

(Type Name/Title signed above)

This ____ day of _____, 2017.

END OF DOCUMENT

SECTION 00610

PERFORMANCE BOND

STATE OF FLORIDA)

SS

COUNTY OF)

KNOW ALL MEN BY THESE PRESENTS, that _____ as

Principal, hereinafter called Contractor, and _____ as Surety,

hereinafter called Surety, are held and firmly bound unto the Town of Cutler Bay, as Obligee,

hereinafter called Owner, in the amount of _____

Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, contractor has by written agreement dated _____, 2017, entered into a Contract with Owner for:

**SW 100 AVENUE STORMWATER RETROFIT PROJECT
TOWN OF CUTLER BAY, FLORIDA**

in accordance with Drawings and Specifications prepared by Town Engineer which Contract is by reference made a part hereof and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that, if the Principal shall in all respects promptly and faithfully perform and comply with the terms and conditions of said Contract and his obligations thereunder and shall indemnify the Owner and the Consulting Engineer and save either or all of them harmless against and from all costs, expenses and damages arising from the performance of said Contract or the repair of any work thereunder, then this obligation shall be void; otherwise, this Bond shall remain in full force and effect, in accordance with the following terms and conditions:

- A. The Principal and Surety jointly and severally agree to pay the Owner any difference between the sum to which the said Principal would be entitled on the completion of the Contract, and that sum which the Owner may be obliged to pay for the completion of said work by Contract or otherwise, and any damages, direct or indirect or consequential, which the said Owner may sustain on account of such work, or on account of the failure of said Contractor to properly and in all things, keep and execute all of the provision of said Contract.
- B. And this Bond shall remain in full force and effect for a period of one (1) year from the date of acceptance of the project by the Owner and shall provide that the Contractor guarantees to repair or replace for said period of one (1) year all work performed and materials and equipment furnished that were not performed or furnished according to the terms of the Contract, and shall make good, defects thereof which have become apparent before the expiration of said period of one (1) year. If any part of the project, in the judgment of the Owner, for the reasons above stated needs to be replaced, repaired or made good during that time, the Owner shall so notify the Contractor in writing. If the Contractor refuses or neglects to do such work within five (5) days from the date of service of such Notice, the Owner shall have the work done by others and the cost thereof shall be paid by the Contractor or his Surety.
- C. And the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive Notice of any change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.
- D. The surety represents and warrants to the Owner that they have a Best's Key Rating Guide General Policyholder's Rating of " _____ " and Financial Category of "Class _____ ".

IN WITNESS WHEREOF, the above bounded parties executed this instrument under their several seals, this ____ day of _____ 2017, A.D., the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS: (If Sole Ownership or Partnership, two (2) Witnesses required)
(If Corporation, Secretary Only will attest and affix seal)

WITNESSES:

PRINCIPAL:

Signature of Authorized Officer
(Affix Seal)

Title

Business Address

City, State & Zip Code

WITNESSES:

SURETY:

Corporate Surety

Title

Business Address

City, State & Zip Code

Name of Local Insurance Agency

[SPACE LEFT INTENTIONALLY BLANK]

CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation names as Principal in the within Bond; that _____ who signed the said bond on behalf of the Principal, was the _____ of said Corporation; that I know his signature, and his signature hereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

Secretary (Corporate Seal)

STATE OF FLORIDA)
 ss
COUNTY OF)

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared _____ to me well known, who being by me first duly sworn upon oath, says that he is the Attorney-in-Fact, for the _____ and that he has been authorized by _____ to execute the foregoing bond on behalf of the Contractor named therein in favor of the Town of Cutler Bay, Florida.

Sworn and subscribed to before me this ___ day of _____, 2017 A.D.

(Attach Power of Attorney)

Notary Public - State of Florida
at Large
My Commission Expires:

END OF SECTION

SECTION 00620

PAYMENT BOND

STATE OF FLORIDA)

ss

COUNTY OF)

KNOW ALL MEN BY THESE PRESENTS, that _____ as Principal,

hereinafter called Contractor, and _____ as Surety, hereinafter

called Surety, are held and firmly bound unto the Town of Cutler Bay, as Oblige, hereinafter called

Owner, in the amount of _____

_____ Dollars (\$ _____) for the payment whereof

Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, 2017, entered into a Contract with Owner for:

**SW 100 AVENUE STORMWATER RETROFIT PROJECT
TOWN OF CUTLER BAY, FLORIDA**

in accordance with Drawings and Specifications prepared by Town Engineer which Contract is by reference made a part hereof and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that if the Principal shall promptly make payment to all claimants, as herein below defined, then this obligation shall be void; otherwise, this Bond shall remain in full force and effect, subject to the following terms and conditions:

- A. A claimant is defined as any person supplying the Principal with labor, material and supplies, used directly or indirectly by the said Principal or any subcontractor in the prosecution of the work provided for in said Contract, and is further defined in Section 255.05(1) of the Florida Statutes.

- B. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after performance of the labor or after complete delivery of materials and supplies by such claimant, may sue on this Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant.
1. Unless claimant, other than one having a direct contract with the Principal, shall within forty-five (45) days after beginning to furnish labor, materials or supplies for the prosecution of the work, furnish the Principal with a notice that he intends to look to this bond for protection.
 2. Unless claimant, other than one having a direct contract with the Principal, shall within ninety (90) days after such claimant's performance of the labor or complete delivery of materials and supplies, deliver to the Principal written notice of the performance of such labor or delivery of such material and supplies and the nonpayment therefore.
 3. After the expiration of one (1) year from the performance of the labor or completion of delivery of the materials and supplies; it being understood, however, that if any limitation embodied in this Bond is prohibited by any law controlling the construction hereof such limitations shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 4. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
- D. The Principal and the Surety jointly and severally, shall repay the Owner any sum which the Owner may be compelled to pay because of any lien for labor or materials furnished for any work included in or provided by said Contract.
- E. The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration of or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications applicable thereto shall in any way affect its obligations on this Bond, and the Surety hereby waives notice of any such change, extension of time, alterations of or addition to the terms of the Contract, or to the work or to the Specifications.
- F. The Surety represents and warrants to the Owner that they have a Best's Key Rating Guide General Policyholder's rating of " _____ " and Financial Category of "Class _____".

IN WITNESS WHEREOF, the above bounded parties executed this instrument under their several seals, this ____ day of _____ 2017, A.D., the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS: (If Sole Ownership or Partnership, two (2) Witnesses Required)
(If Corporation, Secretary Only will attest and affix seal)

WITNESSES:

PRINCIPAL:

Signature of Authorized Officer
(Affix Seal)

Title

Business Address

City, State & Zip Code

WITNESSES:

SURETY:

Corporate Surety

Title

Business Address

City, State & Zip Code

Name of Local Insurance Agency

CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the within Bond; that _____ who signed the said bond on behalf of the Principal, was then _____ of said Corporation; that I know his signature, and his signature hereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

Corporate Secretary

[Seal]

STATE OF FLORIDA)
 ss
COUNTY OF)

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared _____ to be well known, who being by me first duly sworn upon oath, says that he is the Attorney-in-Fact, for the _____ and that he has been authorized by to execute the foregoing bond on behalf of the Contractor named therein in favor of the Town of Cutler Bay, Florida.

Sworn and subscribed to before me this ___ day of _____, 2017 A.D.

(Attach Power of Attorney)

Notary Public - State of Florida
at Large
My Commission Expires:

END OF SECTION

SECTION 00650

CERTIFICATE OF INSURANCE

THIS IS TO CERTIFY THAT THE _____

(Insurance Company)

Address _____

of _____

has issued policies of insurance, as described below and identified by a policy number, to the insured named below; and to certify that such policies are in full force and effect at this time. It is agreed that none of these policies will be canceled or changed so as to affect the interest(s) of the Town of Cutler Bay (hereinafter sometimes called the Owner) until thirty (30) days after written notice of such cancellation or change has been delivered to the Town Clerk, copy to Engineer.

Insured _____

Address _____

Status of Insured: _____ Corporation _____ Partnership _____ Individual

Location of Operations Insured _____

Description of Work:

**SW 100 AVENUE STORMWATER RETROFIT PROJECT
TOWN OF CUTLER BAY, FLORIDA**

INSURANCE POLICIES IN FORCE:

<u>Forms of Coverage</u>	<u>Policy Number</u>	<u>Exp. Date</u>
*Workers Comp./Employers Liability	_____	_____
+Comprehensive Automobile Liability	_____	_____
oComprehensive General Liability	_____	_____
+Excess Liability	_____	_____
Other (Please specify type: _____)	_____	_____

POLICY INCLUDES COVERAGE FOR:		YES	NO
1.	Additional Insured: Owner & Engineer	_____	_____
2.	*Liability under the United States Longshoremen's and Harbor Workers' Compensation Act.	_____	_____
3.	+All owned, hired, or nonowned automotive equipment used in connection with work done for the Owner.	_____	_____
4.	oContractual Liability	_____	_____
5.	oDamage caused by explosion, collapse or structural injury, and damage to underground utilities.	_____	_____
6.	oProducts/Completed Operations	_____	_____
7.	oOwners and Contractors Protective Liability	_____	_____
8.	oPersonal Injury Liability	_____	_____
9.	+Excess Liability applies excess of:	_____	_____
	(a) Employers Liability	_____	_____
	(b) Comprehensive General Liability	_____	_____
	(c) Comprehensive Automobile Liability	_____	_____

TYPES OF POLICY	FORMS OF COVERAGE	LIMITS OF LIABILITY	
Workers' Compensation	Bodily Injury	\$ _____	Statutory
Employers Liability	Bodily Injury	\$ _____	Each Accident
	Disease	\$ _____	Each Person
	Disease	\$ _____	Policy Limit
Comprehensive Auto Liability	Combined Single Limit BI/PD	\$ _____	Each Accident

Comprehensive General Liability	Bodily Injury	\$ _____ Each Occurrence
		\$ _____ Aggregate
	Property Damage	\$ _____ Each Occurrence
		\$ _____ Aggregate
OR		
	Combined Single Limit BI/PD Occurrence	\$ _____ Each
		\$ _____ Aggregate

Excess Liability	Combined Single Limit BI/PD	\$ _____ Aggregate
------------------	-----------------------------	--------------------

Other

The Insurance Company hereby agrees to deliver, within ten (10) days, two (2) copies of the above policies to the Engineer when so requested.

NOTE: Entries on this certificate are limited to the Authorized Agent or Insurance Company Representative.

Date _____

SEAL) _____
Insurance Company

Issued at _____

Authorized Representative

Insurance Agent or Company

Send original and one copy to:

Town of Cutler Bay
Public Works Department
Town of Cutler Bay Town Hall
10720 Caribbean Boulevard, Suite 105
Cutler Bay, Florida 33189
Attention: Debra E. Eastman, MMC, Town Clerk

END OF SECTION

SECTION 00660

**ACKNOWLEDGEMENT OF CONFORMANCE
WITH O.S.H.A. STANDARDS**

TO THE TOWN OF CUTLER BAY:

We, _____, hereby acknowledge and agree that as Contractors for the construction of the SW 100 AVENUE STORMWATER RETROFIT PROJECT, TOWN OF CUTLER BAY, FLORIDA, Town Project No. ITB #17-08, within the limits of the Town of Cutler Bay, Florida, that we have the sole responsibility for compliance with all requirements of the Federal Occupational Safety and Health Act of 1970, and all State and Local Safety and Health regulations, and agree to indemnify and hold harmless the Town of Cutler Bay, and its Consulting Engineers against any and all legal liability or loss the Town, or the Engineer may incur due to _____ failure to comply with such act.

ATTEST

CONTRACTOR

ATTEST

BY: _____
NAME

DATE

END OF SECTION

SECTION 00665

TRENCH SAFETY ACT COMPLIANCE

Bidder acknowledges that the Florida Trench Safety Act, Section 553.60 et. seq. which became effective October 1, 1990, shall be in effect during the period of construction of the project. The Bidder, by signing and submitting the bids, in writing, assuring that it will perform any trench excavation in accordance with applicable trench safety standards. The Bidder further identifies the following separate item of costs of compliance with the applicable trench safety standards as well as the methods of compliance:

Methods of Compliance

Total \$ _____

Bidder acknowledges that this cost is included in the applicable items of the Proposal and in the Grand Total Bid Price. Failure to complete the above will result in the bid being declared non-responsive.

The Bidder is, and the Owner and Engineer are not, responsible to review or assess Bidder's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act". Bidder is, and the Owner and Engineer are not, responsible to determine if any safety or safety related standards apply to the project, including but not limited to, the "Trench Safety Act."

Signature of Authorized Representative (Manual)

Name of Authorized Representative (Typed or Printed)

Sworn to and subscribed before me in the State and County first mentioned above on the day of _____, 2017.

(affix seal)

Notary Public
My Commission Expires:

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

SECTION 00700

**STANDARD
GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT**

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

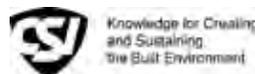
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

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TOWN OF CUTLER BAY

ITB # 17-08

SW 100 AVENUE STORMWATER RETROFIT PROJECT

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National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.1 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain

to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the

Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work

at the Site.

following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order

1.02 *Terminology*

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.1 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.2 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.3 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given

at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.4 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.5 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.6 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.7 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to

Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor’s full responsibility therefor

2. Contractor’s Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor’s Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 Intent

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.2 Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such

provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.3 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. Contractor’s Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. Contractor’s Review of Contract Documents During Performance of Work: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

- a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.4 Amending and Supplementing Contract

Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.5 Reuse of Documents

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.6 Electronic Data

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media

format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.1 Availability of Lands

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Subsurface and Physical Conditions

A. Reports and Drawings: The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

Work in connection therewith (except as aforesaid) until receipt of written order to do so.

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.3 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
- b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

- a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
- b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.4 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change

Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.5 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer’s judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.6 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

5.1 To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

5.2 Performance, Payment, and Other Bonds

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed

by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as 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 Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02

5.3 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.4 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.5 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor,

any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under

Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.6 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.7 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials

and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such

identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.8 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds there under. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other

perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.9 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.10 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each

provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.11 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.2 *Labor; Working Hours*

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

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.3 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.4 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be

submitted in accordance with the requirements of Article

12. Adjustments in Contract Times may only be made by a Change Order.

6.5 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of

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material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified , and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.6 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.7 *Patent Fees and Royalties*

A. 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 of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.8 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.9 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as

provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and

machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

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

- 1. all persons on the Site or who may be affected by the Work;
- 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
- 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor,

(as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor’s duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer’s review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor’s responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by

Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

- 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
- 2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

- 1. observations by Engineer;
- 2. recommendation by Engineer or payment by Owner of any progress or final payment;
- 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
- 4. use or occupancy of the Work or any part thereof by Owner;
- 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer; any inspection, test, or approval by others; or
- 6. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

- 1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
- 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services

A. Contractor will not be required to provide professional design services unless such services are

specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.1 Related Work at Site

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

- 1. written notice thereof will be given to Contractor prior to starting any such other work; and
- 2. if Owner and Contractor are unable to agree

on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.2 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

- 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
- 2. the specific matters to be covered by such authority and responsibility will be itemized; and
- 3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.3 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.1 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.2 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.3 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.4 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.5 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.6 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.7 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.8 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.9 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.1 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.2 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.3 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.4 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If

Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.5 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.6 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.7 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.8 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner

and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.9 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and

approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.1 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.2 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.3 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work

actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.4 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.5 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the

opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or
3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.5.C or denial pursuant to Paragraphs 10.5.C.3 or 10.5.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.1 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. 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 the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. 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, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented

from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects,

estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

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

4. Costs due to the negligence of 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.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.2 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*

1. Contractor agrees that:

a. the cash allowances include the cost to

Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.3 Unit Price Work

12.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially

Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

12.2 when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.3 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.4 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as

contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.2 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs

so that they may comply therewith as applicable.

13.3 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.4 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by

Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.5 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.6 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of

or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.7 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

- 1. repair such defective land or areas; or
- 2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or

removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.7 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.8 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.9 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored

elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.2 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other

documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the

quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer’s review of Contractor’s Work for the purposes of recommending payments nor Engineer’s recommendation of any payment, including final payment, will impose responsibility on Engineer:

- a. to supervise, direct, or control the Work, or
- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
- c. for Contractor’s failure to comply with Laws and Regulations applicable to Contractor’s performance of the Work, or
- d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

5. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer’s opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer’s opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer’s recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor’s performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner’s satisfaction the reasons for such action.

3. If it is subsequently determined that Owner’s refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.3 *Contractor’s Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.4 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is

substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.5 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that

can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.6 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.7 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of

inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
- b. consent of the surety, if any, to final payment;
- c. a list of all Claims against Owner that Contractor believes are unsettled; and
- d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.8 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.9 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to

Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.2 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the

difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.3 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss

arising out of or resulting from such termination.

15.4 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

- 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
- 2. agrees with the other party to submit the Claim to another dispute resolution process, or
- 3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 16 - DISPUTE RESOLUTION

16.1 *Methods and Procedures*

ARTICLE 17 – MISCELLANEOUS

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

17.1 Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

17.2 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

- 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or
- 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.3 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.4 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto 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. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.5 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the

Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.6 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.7 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

END OF SECTION

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SECTION 00800

SUPPLEMENTARY CONDITIONS

1. **DEFINITIONS**

Add the following:

The term(s) "**or equal**" or "**approved equal**," shall be interpreted to mean an item or material or equipment similar to that named and which is suited to the same use and capable of performing the same function and be of the same quality as that named. Such material or equipment shall be subject to approval by the Engineer.

The term **Acceptance**, shall be interpreted to mean that the OWNER of the work is satisfied that it is fully complete and in accordance with the Contract Documents.

The term **Affidavit**, shall be interpreted as the instrument which is to be signed by the Contractor and submitted to the OWNER through the Engineer, upon completion of that job, showing that all bills have been paid. It shall also mean such instrument that may be requested by the OWNER incident to partial payments.

The term **Approval**, shall be interpreted as the item in question is accepted as satisfactory.

The term **Article**, shall be interpreted as the prime subdivision of a section of these or any other referenced Specifications, the instructions to Bidders, the Special Conditions and the General Conditions.

The term **Materials**, shall be interpreted as any substance proposed to be used in connection with the construction of any structure, facility or appurtenance, or of other work under the contract.

The term "**Provided**", as used in the Specifications upon the Drawings, shall be understood to mean "provided complete in place", that is, "furnished and installed". Where "as shown," "as indicated", "as detailed", or words of similar importance are used, it shall be understood that the references to the Drawings and/or Specifications accompanying these documents are intended unless otherwise expressly stated.

The words "**furnish**", "**furnish and**", "**install**", and "**provide**" or words with similar meaning shall be interpreted unless otherwise specifically stated, to mean "furnish and install complete in place and ready for service".

2. **AWARD OF CONTRACT**

The award of the contract, if it is awarded, will be to the lowest responsible, responsive Bidder. No Notice of Award will be given until the OWNER has concluded such investigations as he deems necessary to establish the responsibility, qualifications and financial ability of the Bidders to do the Work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the Bid of any Bidder who does not pass such investigation to the OWNER's satisfaction. In analyzing Bids, the OWNER may take into consideration alternates and unit prices, if requested by the Bid forms. If the Contract is awarded, the OWNER will issue the Notice of Award and give the successful Bidder a contract for execution within one hundred and twenty (120) days after the opening of Bids.

3. **FORFEITURE OF BID SECURITY**

Failure of the successful Bidder to execute and deliver the Agreement and deliver the required Bonds to the OWNER within 10 working days or 15 calendar days of receipt of the Agreement from the Owner, shall be just cause for the OWNER to annul the Notice of Award and declare the Bid and any security therefore forfeited.

4. **QUALIFICATION OF SUB CONTRACTORS MATERIALMEN AND SUPPLIERS**

Within ten working days after bid opening, the CONTRACTOR will submit to the OWNER and the ENGINEER for acceptance a list of the names of subcontractors and such other persons and organizations (including those who are to furnish principal items of materials or equipment) proposed for those portions of the work as to which the identity of the subcontractors and other persons and organizations must be submitted as specified in the Contract Documents. Within thirty working days after receiving the list, the Engineer will notify the CONTRACTOR in writing if either the OWNER or the ENGINEER, after due investigation, has reasonable objection to any subcontractor, person or organization on such list. The failure of the OWNER or the ENGINEER to make objection to any subcontractor, person or organization on the list within thirty days of receipt shall constitute an acceptance of such subcontractor, person or organization. Acceptance of any such subcontractor, person or organization shall not constitute a waiver of any right of the OWNER or the ENGINEER to reject defective work, material or equipment or work material or equipment not in conformance with the requirements of the contract documents.

5. **DELIVERY OF BONDS**

Add to paragraph 2.01

Failure of the successful Bidder to execute the Agreement and deliver the required Bonds within ten (10) days of the Notice of Award shall be just cause for the Owner to annul the award and declare the Bid and any guarantee thereof forfeited.

6. **COPIES OF DOCUMENTS**

Add the following to paragraph 2.02

The Contractor will be furnished, free of charge, up to five (5) copies of the drawings and specifications in lieu of the ten (10) copies as stated.

7. **CHANGE OF THE CONTRACT TIME**

Add paragraph 12.03

Because this is a calendar day contract, normal rainfall, weather and climatic conditions which may be reasonably expected are not considered grounds for an extension of contract time.

8. **PAYMENTS TO CONTRACTOR AND COMPLETION**

Add the following to paragraph 14.07(c).

The certificate of completion will not be issued nor the final payment made until ALL punch list items have been completed.

9. **CONTRACTOR'S LIABILITY INSURANCE**

Refer to General Condition 5.04

The Contractor will, at his own expense, purchase and maintain such insurance as will protect the Owner and the Contractor from claims under workmen's compensation laws, disability benefit laws or other similar employee laws; from claims for damages because of bodily injury, occupational sickness or disease, or death of his employees, or any person other than his employees, including claims insured by usual personal injury liability coverage; from claims for injury to or destruction of tangible property including loss of use resulting therefrom - any or all of which may arise out of or result from the Contractor's operations under the Contract Documents, whether such operations be by any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts may be legally liable. This insurance shall be written for not less than \$1,000,000.00 combined single limit per occurrence (no aggregate limitation) or as required by law, whichever is greater, and shall include contractual liability insurance. Before starting the work, the Contractor will file with the Owner and Engineer certificates of such insurance, acceptable to the Owner; these certificates shall contain a provision that the coverage afforded under the policies will not be cancelled or materially changed until at least 15 days after written notice is given to the Owner and Engineer. These policies shall be written to cover the Contractor and Owner jointly. The Certificate of Insurance form is included in Section 00650.

10. **OWNERS INDEMNITY**

Refer to General Conditions 5.03 through 5.04 and 6.20.

- A. The Contractor shall obtain, maintain and furnish to the Owner during the life of this Contract, full Owner's Protective Liability Insurance that will protect him against all losses or claims which may arise from operations under the Contract Documents.
- B. To the fullest extent permitted by law, the CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the ENGINEER, and their officers, agents, and employees, against and from all claims and liability arising under or by reason of the Contract or any performance of the WORK, but not from the sole negligence or willful misconduct of the OWNER and/or the ENGINEER. Such indemnification by the CONTRACTOR shall include but not be limited to the following:
1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR or its agents in the performance of the WORK, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the CONTRACTOR or its agents;
 2. Liability or claims arising directly or indirectly from or based on the violation of any law, ordinance, regulation, order, or decree, whether by the CONTRACTOR or its agents;
 3. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its agents, or the OWNER in the performance of this Contract of any copyrighted composition, secrete process, patented or unpatented invention, article, or appliance, unless otherwise specifically stipulated in this Contract;
 4. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the OWNER or any other parties by the CONTRACTOR or its agents;
 5. Liabilities or claims arising directly or indirectly from the willful misconduct of the CONTRACTOR or its agents; and
 6. Liabilities or claims arising directly or indirectly from any breach of the obligations assumed herein by the CONTRACTOR.
- C. The CONTRACTOR shall reimburse the OWNER, and the ENGINEER for all costs and expenses, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs) incurred by said OWNER, and the ENGINEER in enforcing the provisions of this Paragraph.

- D. The indemnification obligation under this Paragraph shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any such subcontractor or other person or organization under worker's compensation acts, disability benefit acts, or other employees benefit acts.

11. **PROPERTY INSURANCE**

Refer to General Conditions 5.06.

- A. The Contractor shall, at his own expense, obtain and maintain property insurance and furnish to the Owner during the life of this Contract the full insurable value of the project. This insurance shall include the interests of the Owner, the Contractor and Subcontractors in the work shall insure against the perils of Fire, Extended Coverage, Vandalism and Malicious Mischief.
- B. The Owner and Contractor waive all rights against each other for damages cause by fire or other perils to the extent covered by insurance provided under this Article, except such rights as they may have to the proceeds of such insurance. The Contractor shall require similar waivers by Subcontractors.

12. **SALES TAX**

Refer to General Conditions 6.10.

The Contractor shall familiarize himself with the requirements and procedures as applicable of the State of Florida pertaining to the exemption from State Sales Tax as it may apply to the Owner.

13. **INDEMNITY**

Refer to General Conditions 5.01.

The Bid Items for Payment and Performance Bond premium and consideration for indemnification to Owner and Engineer are included in the Schedule of Prices and must be completed by the Bidder in order to comply with Florida Statute 725.06.

14. **PERMITS**

Refer to General Conditions 6.08.

The Contractor will be required to obtain all required permits, including a permit from the Town of Cutler Bay Public Works Department, prior to the start of construction. The Contractor will be required to comply with all permitted drawings.

15. **LAWS AND REGULATIONS**

Refer to General Conditions 6.09

- A. The Contractor shall obey all applicable Federal, State and local laws including but not limited to the ones listed below.
- B. The Contractor shall comply with Executive Order No. 11246, entitled "Equal Opportunity Employment," as amended by Executive Order No. 11275, and as supplemented in Department of Labor Regulations (No. 41 CFR, Chapter 60).
- C. The Copeland "Anti-Kickback" Act (18 U.S.C. Section 874), as supplemented in U.S. Department of Labor Regulations (29 CFR, Chapter 60).
- D. All applicable standards, orders or regulations issued pursuant to the Clean Air Act of 1970 (40 U.S.C. Section 1857 et. seq.) as amended and the Federal Water Pollution Control Act (33 U.S.C. Section 1251 et seq.) as amended.
- E. The Florida State Statute 446.101 Apprentice and Training Employment Regulations.
- F. Florida Industrial Code No. 8C as amended and especially 8C-29 (CB-1958), Florida Department of Commerce, Bureau of Workmen's Compensation.
- G. The requirements of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 200d) (Nondiscrimination in Federally Assisted Programs) and implementing regulations issued at 24 CFR Part 1.
- H. Age Discrimination Act of 1975 (42 U.S.C. 6101-07) and implementing regulations at 24 CFR Part 146, and the prohibitions against discrimination against handicapped individuals under section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and implementing regulations at 24 CFR Part 8.
- I. The requirements of section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u).
- J. The requirements of Executive Orders 11625 and 12432 (concerning Minority Business Enterprise), and 12138 (concerning Women's Business Enterprise).

16. **REVIEW OF APPLICATIONS FOR PROGRESS PAYMENTS**

Refer to General Conditions 14.02

Owner shall, within thirty (30) days of presentation to him of the Application for Payment with Engineer's recommendation pay Contractor the amount recommended. This is in lieu of 20 days.

17. **PARTIAL AND FINAL PAYMENT PROCEDURES**

Refer to General Conditions 14.02 and 14.07

- A. If the work progresses according to this Contract, the Contractor will be paid each month, 90 percent of the value of the work completed during the preceding month. For the purpose of preparing a monthly estimate for partial payment, the Contractor will make an approximate estimate of the value of all work done and materials furnished as of the last day of each calendar month, and will deduct 10 percent thereof and all previous payments and charges, and the balance will be paid by the Owner to the Contractor on or about sixty days after the submittal to the Owner. The Owner's Engineer shall review, revise and correct, if necessary, and then approve the estimate for partial payment before it is submitted by the Owner's Engineer to the Owner. The 10 percent which is deducted each month is reserved by the Owner as a partial guaranty to it of the faithful execution of this Contract. As a consideration of such payment of 90 percent, the Owner shall have the right to enter upon and put into proper service any or all parts of the work which may be in condition for use; however, such use shall not be construed as the final acceptance and the commencement of the one year guarantee bond period for any or all parts of the work, unless final acceptance is made for the complete project at that time. No claim or charge is to be made by the Contractor for such use, nor is such use to be construed as an acceptance by the Owner of any part of the work so used.
- B. Upon receipt of written notice from the Contractor that the work has been completed in conformity with the Drawings and Specifications and any approved changes thereto, the Owner's Engineer shall promptly examine the work and, making such tests as he may deem proper and using all of the care and judgment normally exercised in the examination of completed work by a properly qualified and experienced professional engineer, shall satisfy himself that the Contractor's statement appears to be correct. He shall then inform the Owner in writing that he has examined the work and that it appears to conform to the Contract Drawings, Specifications and any approved Change Orders and that therefore he recommends acceptance and final payment to the Contractor. However, it is agreed by the Owner and the Contractor that such statement by the Owner's Engineer does not in any way relieve the Contractor from his responsibility to deliver a completed job in good and workmanlike condition, and does not render the Engineer or the Owner liable for any faulty work done or materials used by the Contractor.
- C. The Owner's Engineer will then make a final estimate of the value of all work done and will deduct therefrom all previous payments which have been made. The Owner's Engineer will report such estimate to the Owner together with his recommendation as to the acceptance of the work or his findings as to any deficiencies therein. Such recommendation as to the acceptance of the work by the Owner's Engineer will be made to his best knowledge and behalf.

After receipt and acceptance by the Owner of the properly executed Affidavit and the Release of Lien and within 60 days after approval of the Engineer's estimate and recommendation by the Owner, the amount of the estimate, less any charges or damages herein provided for, will be paid. Upon such final payment, the Owner shall be released by the Contractor from all liability whatever growing out of this Contract, except for the balance, if any, of such amount as may have been retained to cover charges, claims or damages, as specified; and if the Owner is satisfied that no such charges, claims or damages exist or will arise, no such amount will be retained. All prior estimates are subject to correction in the final estimate.

- D. Each monthly request for a partial payment shall be submitted on an Application for Payment Form shown on Page 125 which shall be accompanied by an executed copy of the Certification of Contractor shown on Page 126, and by a progress report.
- E. Measurement and payment for work items for which direct payment is provided will be achieved as required by the Technical Specifications. When no direct payment for work or materials is required in General Conditions, the Special Conditions, the Proposal, the sections of the Technical Specifications or in other parts of the Contract Documents or shown, indicated or noted on the Drawings, compensation therefor shall be included in the Contract Unit or Lump Sum Prices for the several pay items under this Contract and shown and listed in the Proposal.
- F. When the work has been completed, the Contractor shall execute a Final Release of Lien and an Affidavit declaring that all bills have been paid in full.
- G. These documents will be furnished to the Owner in a form similar to those which appear on the following pages:

18. **MEDIATION**

Any claim or dispute arising out of or related to this agreement shall be subject to informal mediation as a condition precedent to the institution of legal or equitable proceeding by either party. Both parties waive the right to arbitration. The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in Miami-Dade County, Florida, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in the circuit court for the 11th Judicial Circuit for the State of Florida.

19. **ATTORNEY'S FEES**

In the event of any dispute and/or legal action arising from an interpretation and/or the performance of any of the documents and/or contracts in this Manual, Owner and Contractor hereby agree that the prevailing party shall be awarded reasonable attorney's fees and costs, including but not limited to, the cost of paralegals, accountants and attorney's fees and costs of appellate proceedings, if applicable.

20. **INDEMNIFICATION AND HOLD HARMLESS**

Notwithstanding anything to the contrary in this Supplementary Condition, the general conditions and/or any other documents in this Manual, and in consideration of the sum of \$10.00 paid by Owner to Contractor, the Contractor hereby agrees to indemnify and hold Owner harmless from any costs, expenses, damages and/or liability to the Owner arising from Contractor's Work.

21. **EXPRESS WARRANTIES**

Notwithstanding any provisions to the contrary under this Supplemental Conditions, the general conditions and/or any other document in this Manual, Contractor expressly warrants all labor and materials used in the Work for a period of one (1) year from the date Final Payment is received by the Contractor.

22. **PROHIBITED MATERIALS**

Pursuant to Chapter 83-174, Laws of Florida, the use of asbestos or asbestos-based materials is strictly prohibited.

23. **RECORDS RETENTION**

Refer to General Conditions 6.12. The Contractor shall retain all relevant project records for three years after receiving final payment from the Owner.

24. **WORK PERFORMED BY EQUIPMENT-RENTAL AGREEMENT**

The limitations set forth in 8-1, concerning the amount of work that may be sublet, do not apply to work performed by equipment-rental agreement. However, for any work proposed to be performed by equipment-rental agreement, notify the Engineer in writing of such intention before using the rented equipment, and indicate whether the equipment will be rented on an operator non-operated basis. Include with the written notice a listing and description of the equipment and a description of the part of the work to be performed with such equipment. As an exception to the above requirements, the Department will not require written notice for equipment to be rented (without operators) from an equipment dealer or from a firm whose principal business is the renting or leasing of equipment.

The operators of all rented equipment, whether rented on an operated or a non-operated basis are operators are subject to all wage rate requirements applicable to the project. When renting equipment without operators, the Contractor shall carry the operators on his own payroll. For equipment that is rented on an operated basis, and when required by the Contract or requested by the Engineer, furnish payrolls from the lessor with the names of the operators shown thereon.

When a lessor provides rentals of equipment on an operated basis that exceed \$10,000, such lessor is subject to any Equal Employment Opportunity requirements that are applicable to the project.

25. **CONTRACTOR PURCHASED EQUIPMENT**

- (a) Title. Subject to the obligations and conditions set forth in this section, title to equipment acquired under a grant or sub-grant will vest upon acquisition in the grantee or sub-grantee respectively.
- (b) States. A State will use, manage, and dispose of equipment acquired under a grant by the State in accordance with State laws and procedures. Other grantees and subgrantees will follow paragraphs (c) through (e) of this section.
- (c) Use.
- (1) Equipment shall be used by the grantee or subgrantee in the program or project for which it was acquired as long as needed, whether or not the project or program continues to be supported by Federal funds. When no longer needed for the original program or project, the equipment may be used in other activities currently or previously supported by a Federal agency.
 - (2) The grantee or sub-grantee shall also make equipment available for use on other projects or programs currently or previously supported by the Federal government, providing such use will not interfere with the work on the projects or program for which it was originally acquired. First preference for other use shall be given to other programs or projects supported by the awarding agency. User fees should be considered if appropriate.
 - (3) Notwithstanding the encouragement in Sec. 18.25(a) to earn program income, the grantee or sub-grantee must not use equipment acquired with grant funds to provide services for a fee to compete unfairly with private companies that provide equivalent services, unless specifically permitted or contemplated by Federal statute.
 - (4) When acquiring replacement equipment, the grantee or sub-grantee may use the equipment to be replaced as a trade-in or sell the property and use the proceeds to offset the cost of the replacement property, subject to the approval of the awarding agency.
- (d) Management requirements. Procedures for managing equipment (including replacement equipment), whether acquired in whole or in part with grant funds, until disposition takes place will, as a minimum, meet the following requirements:
- (1) Property records must be maintained that include a description of the property, a serial number or other identification number, the source of property, who holds title, the acquisition date, and cost of the property, percentage of Federal participation in the cost of the property, the location, use and condition of the property, and any ultimate disposition data including the date of disposal and sale price of the property.
 - (2) A physical inventory of the property must be taken and the results reconciled with the property records at least once every two years.
 - (3) A control system must be developed to ensure adequate safeguards to prevent loss, damage, or theft of the property. Any loss, damage, or theft shall be investigated.

- (4) Adequate maintenance procedures must be developed to keep the property in good condition.
 - (5) If the grantee or sub-grantee is authorized or required to sell the property, proper sales procedures must be established to ensure the highest possible return.
- (e) Disposition. When original or replacement equipment acquired under a grant or subgrant is no longer needed for the original project or program or for other activities currently or previously supported by a Federal agency, disposition of the equipment will be made as follows:
- (1) Items of equipment with a current per-unit fair market value of less than \$5,000 may be retained, sold or otherwise disposed of with no further obligation to the awarding agency.
 - (2) Items of equipment with a current per unit fair market value in excess of \$5,000 may be retained or sold and the awarding agency shall have a right to an amount calculated by multiplying the current market value or proceeds from sale by the awarding agent's share of the equipment.
 - (3) In cases where the grantee or sub-grantee fails to take appropriate disposition actions, the awarding agency may direct the grantee or sub-grantee to take excess and disposition actions.
- (f) Federal equipment. In the event a grantee or sub-grantee is provided federally-owned equipment:
- (1) Title will remain vested in the Federal Government.
 - (2) Grantees or sub-grantees will manage the equipment in accordance with Federal agency rules and procedures, and submit an annual inventory listing.
 - (3) When the equipment is no longer needed, the grantee or sub-grantee will request disposition instruction from the Federal agency.
- (g) Right to transfer title. The Federal awarding agency may reserve the right to transfer title to the Federal Government or a third part named by the awarding agency when such a third party is otherwise eligible under existing statutes. Such transfers shall be subject to the following standards:
- (1) The property shall be identified in the grant or otherwise made known to the grantee in writing.
 - (2) The Federal awarding agency shall issue disposition instruction within 120 calendar days after the end of the Federal support of the project for which it was acquired. If the Federal awarding agency fails to issue disposition instruction within the 120 calendar-day period the grantee shall follow Sec. 18.32(e).
 - (3) When title to equipment is transferred, the grantee shall be paid an amount calculated by applying the percentage of participation in the purchase to the current fair market value of the property

26. **PUBLICLY-OWNED EQUIPMENT**

Publicly owned equipment should not normally compete with privately owned equipment on a project to be let to contract. There may be exceptional cases, however, in which the use of

equipment of the State or local public agency for highway construction purposes may be warranted or justified. A proposal by any STD for the use of publicly owned equipment on such a project must be supported by a showing that it would clearly be cost effective to do so under the conditions peculiar to the individual project or locality.

Where publicly owned equipment is to be made available in connection with construction work to be let to contract, Federal funds may participate in the cost of such work provided the following conditions are met:

- (1) The proposed use of such equipment is clearly set forth in the Plans, Specifications and Estimate (PS&E) submitted to the Division Administrator for approval.
- (2) The advertised specifications specify the items of publicly owned equipment available for use by the successful bidder, the rates to be charged, and the points of availability or delivery of the equipment; and
- (3) The advertised specifications include a notification that the successful bidder has the option either of renting part or all of such equipment from the State or local public agency or otherwise providing the equipment necessary for the performance of the contract work.

In the rental of publicly owned equipment to contractors, the State or local public agency shall not profit at the expense of Federal funds.

Unforeseeable conditions may make it necessary to provide publicly owned equipment to the contractor at rental rates agreed to between the contractor and the State or local public agency after the work has started. Any such arrangement shall not form the basis for any increase in the cost of the project on which Federal funds are to participate.

When publicly owned equipment is used on projects constructed on a force account basis, costs may be determined by agreed unit prices or on an actual cost basis. When agreed unit prices are applied the equipment need not be itemized nor rental rates shown in the estimate. However, if such work is to be performed on an actual cost basis, the STD shall submit to the Division Administrations for approval the schedule of rates proposed to be charged, exclusive of profit, for the publicly owned equipment made available for use.

27. **SALVAGE CREDITS**

Salvage credit to Federal-aid projects is governed by State procedures. If the State has procedures that do not require credit to the project, then credit to a Federal-aid project is also not required. However, if a State does not have procedures addressing salvage credit, then salvage credit is required unless one of the following circumstances are met:

- a. the salvaged item has a value less than \$5,000.
 - b. the salvaged item becomes the contractor's property by virtue of the contract provisions,
- or**

- c. the salvaged item will be reused in future projects eligible under title 23 U.S.C. until its useful life is expended.

The disposition of salvaged items on demonstration projects for which project funds are designated by amount and location should be determined in consultation with the appropriate program office in headquarters.

When salvage is required, careful attention should be given to the contract provisions for salvage to ensure that the cost of the operation (i.e. removal or salvage), does not exceed the value of the item(s) to be salvaged. Items to be salvaged may be unused construction materials, salvaged highway appurtenances, or other equipment or material for which the useful life is greater than one year.

28. **STATE PREFERENCE**

No requirement shall be imposed and no procedure shall be enforced by any State transportation department in connection with a project which may operate:

- (a) To require the use of or provide a price differential in favor of articles or materials produced within the State, or otherwise to prohibit, restrict or discriminate against the use of articles or materials shipped from or prepared, made or produced in any State, territory or possession of the United States; or
- (b) To prohibit, restrict or otherwise discriminate against the use of articles or materials of foreign origin to any greater extent than is permissible under policies of the Department of Transportation as evidenced by requirements and procedures prescribed by the FHWA Administrator to carry out such policies.

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Date: _____

APPLICATION FOR PAYMENT NO. _____

Project No. _____

To: _____ (OWNER)

From: _____ (CONTRACTOR)

Contract for: _____

For Work accomplished through the date of: _____, _____.

SUMMARY OF CONTRACT AMOUNTS

- 1. Original Contract Price: \$ _____
- 2. Change Orders No. through: \$ _____
- 3. Contract Price with all approve Change Orders: \$ _____
- 4. Work completed to date: \$ _____
- 5. Less (10%) Retainage: \$ _____
- 6. Amount due to date: \$ _____
- 7. Less previous payments (or applications): \$ _____
- 8. **AMOUNT DUE THIS APPLICATION:** \$ _____

Note: This application must be accompanied with the Certification of Contractor Form and worksheet for completed items as shown on page 126.

Accompanying Documentation:

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Dated: _____, 2017.

By: _____
Project Manager

CERTIFICATION OF CONTRACTOR

According to the best of my knowledge and belief, I certify that all items and amounts shown on Application for Payment No. _____ are correct, that all work has been performed and/or materials supplied in full accordance with the terms and conditions of this Contract, dated _____, 2017, between _____ (Owner) and _____ (Contractor);

I further certify that all just and lawful bills against the undersigned and his subcontractors and suppliers for labor, material and equipment employed in the performance of this Contract have been paid in full accordance with their terms and conditions; that all taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax Act), as amended, have been paid and discharged; and that there are no Vendor's, Mechanic's or other Liens or rights to liens or conditional sales contracts which should be satisfied or discharged before such payment is made.

Date: _____

Contractor: _____

STATE OF FLORIDA)

ss

COUNTY OF _____)

Personally appeared before me this _____ day of _____, 2017,

_____ known (or made known) to me as the

(Owner) (Partner)(Corporate Officer)- Give Title of _____ Contractor(s), who
subscribed and swore to the above instrument in my presence.

Notary Public - (Type Name)
State of Florida-at-Large
My Commission Expires: _____

The Contractor shall execute this Certificate and attach it to each Application For Payment.

AFFIDAVIT

STATE OF FLORIDA)
 ss
COUNTY OF)

Before me, the undersigned authority, authorized to administer oaths and take acknowledgements, personally appeared _____, who, after being first duly sworn, upon oath deposes and says that all lienors contracting directly with, or directly employed by (him, them, it) and that all taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax Act) as amended, have been paid and discharged, and that all bill, wages, fees, claims and other charges incurred by _____ in connection with the construction of _____ have been paid in full.

SIGNED: _____

By: _____

WITNESSES:

SWORN AND SUBSCRIBED TO BEFORE ME THIS ____ day _____, 2017 AD.

Notary Public
State of Florida-at-Large

My Commission Expires: _____

FINAL RELEASE OF LIEN

KNOW ALL MEN BY THESE PRESENTS, that _____
_____ for and in consideration of the sum of
_____ Dollars
(\$_____) paid to _____ by the _____, receipt of
which is hereby acknowledged, do (es) hereby release and quitclaim to the Town of Cutler Bay,
the Owner, its successors or assigns, all liens, lien rights, claims or demands of any kind
whatsoever which _____ now has (have) or might have against the
property, building, and/or for any incidental expense for the construction of:

thereon or in otherwise improving said property situated as above described.

IN WITNESS WHEREOF _____ have (has) hereunto set _____ hand and seal this
_____ day of _____, 2017, A.D.

WITNESS:

_____ (Seal)

SWORN AND SUBSCRIBED TO BEFORE ME THIS _____ day of _____, 2017 A.D.

Notary Public State of Florida
at-Large
My Commission Expires: _____

SECTION 00900

ADDENDUM

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SECTION 01000

SUPPLEMENTARY CONDITIONS

1.1 SCOPE

- A. This project consists of roadway and drainage improvements within the Town of Cutler Bay, as shown on project plans.

1.2 NOTICES

- A. In conformance with the requirements of Article 1.04 Notice and Service of the General Conditions all notices or other papers required to be delivered by the Contractor to the Owner shall be delivered to the office of the Owner's Engineer, at an address provided to the Contractor at the preconstruction conference.

1.3 COORDINATION OF PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS

- A. In case of discrepancy, computed dimensions shall govern over scaled dimensions; supplemental specifications shall govern over Standard Specifications; and Special Conditions shall govern over; Drawings, Supplemental and Standard Specifications.

1.4 LAYING OUT THE WORK

- A. The Contractor shall be responsible for establishing all lines and grades together with all reference points as required by the various trades. All layout work shall be done using competent and experienced personnel under the supervision of a Land Surveyor registered in the State of Florida.
- B. The Contractor shall provide all labor, instruments and stakes, templates, and other materials necessary for marking and maintaining all lines and grades. The lines and grades shall be subject to any checking the Owner or Engineer may decide necessary.
- C. No separate cost item is provided for laying out the work, the cost of which is considered incidental to the work and shall be included in the unit prices for items in the Proposal.

- D. The Contractor shall safeguard all existing and known Property corners, monuments and marks adjacent to but not related to the work and shall bear the cost of re-establishing them if disturbed or destroyed. He shall also safeguard all points, stakes, grade marks, monuments and bench marks made or established on the work, bear the cost of re-establishing them if disturbed and bear the cost of rectifying work improperly installed due to not maintaining or protecting or to removing without authorization such established points, stakes and marks.

1.5 PRECONSTRUCTION CONFERENCE

- A. In addition to the provisions of the General Conditions, Article 1.03.9, the following parties will be asked to attend the Preconstruction Conference: BellSouth Telephone Company, Comcast Cable TV, Florida Power & Light Company, Town of Cutler Bay Public Works, City Gas Company of Florida, Miami-Dade Water and Sewer Department, and Miami-Dade County Public Works Department. At the preconstruction meeting, the Contractor shall present a construction phasing plan for the Engineers approval.

1.6 PERMITS AND LICENSES

- A. Before starting work, the Contractor shall obtain and pay for all required licenses and permits.

1.7 CONTRACTOR'S OFFICE

- A. The Contractor shall provide and maintain an office with telephone facilities where he or a responsible representative of his organization may be reached at any time while work is in progress. Such office may be at any location the Contractor considers desirable within Miami-Dade or Broward County.

1.8 USE OF EXPLOSIVES

- A. No blasting shall be done.

1.9 USE OF PUBLIC STREETS

- A. The use of public streets and alleys shall be such as to provide a minimum of inconvenience to the public and to other traffic. Certain elements of the work will be conducted off peak hours as specified in the Contract Documents. Any earth or other excavated material spilled from trucks shall be removed immediately by the Contractor and the streets cleaned to the satisfaction of the Owner.

1.10 CARE OF TREES, SHRUBS AND GRASS

- A. The Contractor shall be fully responsible for maintaining in good condition all cultivated grass plots, trees and shrubs. Where maintained shrubbery, grass strips or area must be removed or destroyed incident to the construction operation, the Contractor shall, after completion of the work, replace or restore to the original condition all destroyed or damaged sod, shrubbery or grass areas. Tree limbs which interfere with equipment operation and are approved for pruning shall be neatly trimmed and the tree cut coated with a tree paint. The cost for restoration shall be included in the total Bid amount, no separate pay item for this work provided.

1.11 **OBSTRUCTIONS**

- A. All water pipes, storm drains, force mains, gas or other piping, telephone or power cables or conduits, and all other obstructions, whether or not shown, shall be temporarily removed from or supported across pipeline excavations. Before disconnecting any pipes or cables, the Contractor shall obtain permission from the owner, or shall make suitable arrangements for their disconnection by the owner. The Contractor shall be responsible for any damage to any such pipes, conduits or cables, and shall restore them to service promptly as soon as the work has progressed past the point involved. Approximate locations of known water, sanitary, drainage, power and telephone installations along route of new pipelines or in vicinity of the work are shown, but must be verified in the field by the Contractor. The Contractor shall uncover these pipes, ducts, cables, etc., carefully, by hand, to verify location and depth of cover. Any discrepancies or differences found shall be brought to the attention of the Owner and Engineer of Record in order that necessary changes may be made. These conditions are supplemental to general requirements elsewhere in these specifications. Where fences, walls or other man-made obstructions exist illegally in the public right-of-way, the Owner will have them removed upon adequate prior notice by the Contractor.

1.12 **DAMAGE TO EXISTING STRUCTURES AND UTILITIES**

- A. The Contractor shall be responsible for and make good all damage to pavement and driveways beyond the limits of the work zone, to buildings, telephone or other cables, water pipes, sanitary pipes, or other structures which may be encountered, whether or not shown on the Drawings.
- B. Information shown on the Drawings as to the location of existing utilities has been prepared from the most reliable data available to the Engineer. This information is not guaranteed, however, and it shall be this Contractor's responsibility to determine the location, character and depth of any existing utilities. He shall assist the utility companies, by every means possible to determine said locations. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from his activities.

1.13 NOTIFICATION TO UTILITY COMPANIES

- A. The excavators shall comply with Florida Statute 553.851 regarding notification of existing gas and oil pipeline company owners and shall also notify "SUNSHINE STATE ONE CALL FOR FLORIDA, INC." at 1-(800)432-4770 prior to excavating. Evidence of such notice shall be furnished to the City prior to excavating.

1.14 TESTS

- A. The Contractor will pay for all required tests. Generally, tests will be compaction and density tests, lime rock quality tests, concrete quality tests (cylinder breaks). On asphaltic concrete and pipe, the manufacturer's or supplier's certificate that the material meets the requirements of the specification will be accepted subject to verification by the Owner's Engineer. Any and all tests which have to be repeated because of the failure of the tested material to meet specifications shall be paid for by the Contractor and the costs of any such tests shall be deducted from payments due the Contractor. Water required for leakage tests shall be furnished by the Contractor.

B. Testing Frequencies

Concrete: Perform one (1) test per 50 C.Y., or at least one (1) per day if less than 50 C.Y.

One test shall consist of one (1) slump, temperature read and one (1) set of five (5) cylinders for compressive strength.

Roadway: For sub-grade perform one (1) density test every 500 L.F. each lane (100% T-99). Sample for proctor test.

For stabilized sub-grade, perform one (1) density test every 500 L.F. each lane (98% T-180). Sample for proctor test, and L.B.R.

For Lime rock Base, perform one (1) density test every 500 L.F. each lane (98% T-180). Use Pit Proctor.

For Curb Pad, perform one (1) density test every 1000 L.F. (98% T-180).

Drainage: For trenches, perform one (1) density test every 1000 L.F.

1.15 RECORD AS-BUILT DRAWINGS

- A. During the entire construction operation, the Contractor shall maintain records of all deviations from the Drawings and Specifications and shall prepare therefrom "record" drawings showing correctly and accurately the locations of all improvements to reflect the work as it was actually constructed. The locations of all improvements shall be as surveyed and certified by a Land Surveyor licensed in the State of Florida and shall include edge of pavement and back of sidewalk elevations taken at 50 foot intervals and at high and low points, rim and invert elevations on all storm water inlets and manholes, trench bottom elevations on all trench drains taken at 25-foot

intervals and top of pipe elevations on all storm sewers taken at 25-foot intervals. These drawings shall consist of reproducible and shall conform to recognized standards of drafting, shall be neat and legible. One set of reproducible and one set of blue line prints shall be submitted to the Owner. Final acceptance of the project will be withheld until delivery of the set of "record" drawings is made to the Owner.

1.16 **SUBSURFACE INVESTIGATION**

- A. The Contractor shall be responsible for having determined to his satisfaction, prior to the submission of his bid, the nature and location of the work, the conformation of the ground, the character and quality of the substrata, the types and quantity of materials to be encountered, the nature of the ground water conditions, the character of equipment and facilities needed preliminary to and during the execution of the work, the general and local conditions and all other matters which can in any way affect the work under this contract. The prices established for the work to be done will reflect all costs pertaining to the work. Any claims for extras based on substrata or ground water table conditions will not be allowed.

1.17 **SUSPENSION OF WORK**

- A. Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction because of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine to compensate for time lost by such delay, with such determination to be set forth in writing.

1.18 **PAYMENT FOR UTILITIES**

- A. The Contractor shall obtain the necessary utility service by making application for the service and paying such fees and charges required by the utility companies.

1.19 **MAINTENANCE OF TRAFFIC**

- A. General:
 - 1. The Contractor shall be responsible for the proper maintenance control and detour of traffic in the area of construction, during the course of construction. All traffic control and maintenance procedures shall be in accordance with the requirements of the Florida Department of Transportation and Miami- Dade County traffic engineering and the Town of Cutler Bay. It shall be the Contractor's responsibility, as Bidder, prior to submitting his Bid, to determine the requirements of these agencies so that his Proposal reflects all costs to be incurred, including the costs to hire off-duty police officers as required. No claims for additional payment will be considered for costs incurred in the proper maintenance, control, detour and protection of traffic.

2. Traffic shall be maintained at all times where practical and as more particularly specified hereinafter. No traffic shall be detoured without prior knowledge and approval of the respective traffic control agency having jurisdiction. The Contractor shall notify such agencies 48 hours in advance of such time he proposes to detour traffic.
3. The Contractor shall keep all law enforcement, fire protection and ambulance agencies informed, in advance, of his construction schedules, and shall notify all such agencies, 48 hours in advance, in the event of detour of any roadway.
4. All traffic control signs and devices, barricades, flashers, flambeaus and similar devices shall be furnished and maintained by the Contractor.
5. Excavated or other material stored adjacent to or partially upon a roadway pavement shall be adequately marked for traffic and pedestrian safety at all times. Necessary access to adjacent property shall be provided at all times.
6. The work shall be conducted in a manner to cause the least possible interruption to traffic. Where traffic must cross excavations, the Contractor shall provide suitable bridges at street intersections and driveways.
7. The Contractor shall notify all businesses in the area that will be affected by the proposed detour or lane closure, 48 hours in advance of proposed work.
8. The Contractor shall provide access to all private property and driveways at all times.

1.20

BARRICADES AND PROTECTION OF WORK

- A. The Contractor shall protect his work throughout its length by the erection of suitable barricades and handrails, where required. He shall further indicate this work at night by the maintenance of suitable lights or flares, especially along or across through-fares. Wherever it is necessary to cross a public walk, he shall provide suitable safe walkways with hand railings. He shall also comply with all laws or ordinances covering the protection of such work and the safety measures to be employed therein. The Contractor shall carry out his work so as not to deny access to private property. All utility access manholes, valves, fire hydrants and letter boxes shall be kept accessible at all times.

END OF SECTION

SECTION 01010

SUMMARY OF WORK

1. GENERAL

1.1 DESCRIPTION

A. Work included: Listing of Significant Items:

1. Work Sequence
2. Contractor Use of Sites
3. Owner Use of Facilities
4. Coordination

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Work for this contract comprises work to be performed on the project entitled: SW 100 AVENUE STORMWATER RETROFIT PROJECT, Town of Cutler Bay, Florida, as shown, described, and detailed within this project manual and on the project plans and specifications.

1.3 WORK SEQUENCE

- A. Construct Work in phases to accommodate Owner's Service requirements during construction period.
- B. Coordinate construction schedule and operations with Engineer.

1.4 CONTRACTOR USE OF SITES

- A. Limit use of sites for Work and for construction operations, to allow for:
 1. Owner servicing areas with municipal services.
 2. Work by other contractors.
 3. Public and Florida Power and Light access to adjacent properties.
- B. Limit access to construction area.
- C. Coordinate use of sites under direction of Engineer.

1.5 OWNER USE OF FACILITIES

- A. Owner will require use of roadway during entire period of construction.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's servicing of area's municipal service needs.

END OF SECTION

SECTION 01025**MEASUREMENT AND PAYMENT****1. GENERAL****1.1 DESCRIPTION**

- A. The Contractor shall receive and accept the compensation provided in the Proposal and the Contract as full payment for furnishing all materials, labor, tools and equipment, for performing all operations necessary to complete the work under the Contract, and also in full payment for all loss or damages arising from the nature of the work, or from any discrepancy between the actual quantities of work and quantities herein estimated by the Engineer/Architect, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the Owner.
- B. The prices stated in the proposal include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the Drawings and specified herein.
- C. The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Bid Form or Payment Items, he shall include the cost for that work in some other applicable bid item, so that his proposal for the project does reflect his total price for completing the work in its entirety.

1.2 MEASUREMENT

- A. The quantities for payment under this Contract shall be determined by measurements of the completed items, in place, ready for service and accepted by the Owner.

1.3 PAYMENT ITEMS

- A. Basis of Payment

Contract prices for the various work items are intended to establish a total price for completing the project in its entirety. The Contractor shall include in the Bid price any work item and materials for which a separate pay item has not been included in the Bid Form. All work and incidental costs shall be included for payment under the several scheduled items of the overall contract, and no separate payment will be made therefor.

END OF SECTION

SECTION 01340

SUBMITTALS AND SUBSTITUTIONS

1. GENERAL

1.1 SECTION INCLUDES:

- A. Work included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

1.2 RELATED SECTIONS:

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
- B. Individual requirements for submittals also may be described in pertinent Sections of these Specifications.
- C. Work not included:
1. Submittals which are not required will not be reviewed by the Engineer.
 2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer.

1.3 SUBMITTALS FOR REVIEW

- A. Make submittals of Shop Drawings, Samples, substitution requests, and other items in accordance with the provisions of this Section.

1.4 QUALITY ASSURANCE

- A. Coordination of submittals:
1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
 3. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.

B. Substitutions:

1. The Contract is based on the standards of quality established in the Contract Documents. Substitutions will be considered only when listed at time of bidding, on the Contractors letterhead and when substantiated by the Contractor's submittal of required data within 10 calendar days after the bid opening.
2. The following products do not require further approval except for interface within the Work:
 - a. Products specified by reference to standard specifications such as ASTM and similar standards.
 - b. Products specified by manufacturer's name and catalog model number.
3. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved in writing for this Work by the Engineer.

C. "Or Equal":

1. Where the phrase "or equal," or "or equal as approved by the Architect/Engineer," occurs in the Contract Documents, do not assume that the materials, equipment, or methods will be approved as equal unless the item has been specifically so approved for this Work by the Engineer.
2. The decision of the Engineer shall be final.

2. **PRODUCTS**

2.1 **SHOP DRAWINGS**

- A. Scale and measurements: Make Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
- B. Types of prints required:
 1. Submit Shop Drawings in the form of three blue line or black line prints of each sheet.
 2. Blueprints alone will not be acceptable.
- C. Review comments of the Engineer will be shown on the blue line or black line when it is returned to the Contractor. The Contractor may make and distribute such copies as are required for his purposes.

2.2 **MANUFACTURER'S LITERATURE**

- A. Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly show which portions of the contents is being submitted for review.
- B. Submit the number of copies which are required to be returned, plus one copy which will be retained by the Engineer.

2.3 **SAMPLES (ONLY IF REQUIRED IN OTHER SECTIONS)**

- A. Provide Sample of Samples identical to the precise article proposed to be provided. Identify as described under "Identification of submittals" below.
- B. Number of Samples required:
 - 1. Unless otherwise specified, submit Samples, in the quantity which is required to be returned, plus one which will be retained by the Engineer.
 - 2. By prearrangement in specific cases, a single Sample may be submitted for review and, when approved, be installed in the Work at a location agreed upon by the Engineer.

3. **EXECUTION**

3.1 **IDENTIFICATION OF SUBMITTALS**

- A. Consecutively number all submittals.
 - 1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
 - 2. On resubmittals, cite the original submittal number for reference.
- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- C. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.
- D. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Make the submittal log available to the Engineer for his review upon request.

3.2 **GROUPING OF SUBMITTALS**

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is

received.

- B.
 - 1. Partial submittals may be rejected as not complying with the provisions of the Contract.
 - 2. The Contractor may be held liable for delays so occasioned.

3.3 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.
- B. In scheduling, allow at least ten working days for review by the Engineer following his receipt of the submittal.

3.4 ENGINEER'S REVIEW

- A. Review by the Engineer does not relieve the Contractor from responsibility for errors which may exist in the submitted data.
- B. Revisions:
 - 1. Make revisions required by the Engineer.
 - 2. If the Contractor considers any required revision to be a change, he shall so notify the Engineer within ten calendar days in writing. If after the review of the Engineer it is determined that the required revisions are in fact a legitimate change in work or time the procedures set forth in Articles 10, 11, & 12 of the General Conditions shall be followed.
 - 3. Make only those revisions directed or approved by the Engineer.
- C. Reimbursement of Engineer's costs:
 - 1. In the event substitutions are proposed to the Engineer after the Contract has been awarded, the Engineer will record all time used by him and by his consultants in evaluation of each such proposed substitution.
 - 2. Whether or not the Engineer approves a proposed substitution, the Contractor promptly upon receipt of the Engineer's billing shall reimburse the Engineer at the rate of three times the direct cost to Engineer and his consultants for all time spent by them in evaluating the proposed substitution.

END OF SECTION

SECTION 01550

MAINTENANCE OF TRAFFIC

1. GENERAL

1.1 DESCRIPTION

- A. The Contractor shall furnish all equipment, supplies, personnel, labor and services to accomplish maintenance of traffic at all locations required to complete this project and as authorized by the Engineer.
- B. The intent is to maintain safe and expeditious movement of traffic around every work area where the public may be exposed to the potential hazards of the contract operations.
- C. The term "Maintenance of Traffic" as used in the contract drawings or in these Specifications shall mean the maintenance of traffic movement through and/or around any work site within a public right-of-way in a manner such as to provide minimum disruption and maximum safety to both the public and project personnel and equipment.

1.2 QUALITY ASSURANCE

- A. Maintenance of Traffic in the public rights-of-way shall be in strict accordance with the manual of uniform traffic control devices (M.U.T.C.D.).
- B. Maintenance of Traffic on F.D.O.T. roads shall be as indicated on the contract drawings and as specified in F.D.O.T. index 600.
- C. All traffic control and warning devices so specified; which are not on F.D.O.T. roadways, shall unless otherwise specified by the Department of Traffic and Transportation, be furnished, installed according to the Miami-Dade County Public Works Manual, part I, Standard Details (No. R-19 series), and maintained by the contractor involved.
- D. When required by the Town of Cutler Bay, supervision of traffic control and safety by a Uniformed Police Officer shall be furnished by the Contractor without cost to the Town. The Contractor is required to retain the services of the Town of Cutler Bay Police Officers for the supervision. Further, any and all additional traffic measures deemed necessary by such officers shall be carried out by the Contractor without cost to the Town.

1.3 ADDITIONAL REQUIREMENTS

- A. All open trenches and holes adjacent to roadway or walkways shall be properly marked and barricaded to assure the safety of both vehicular and pedestrian traffic.
- B. No trenches or holes near walkways, in roadways or their shoulders are to be left open during night-time hours without express permission of the Town of Cutler Bay, Public Works Department and the Engineer, in writing. Trenches shall be backfilled or covered with steel plates.

END OF SECTION

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SECTION 01640

PRODUCT HANDLING

1. GENERAL

1.1 SECTION INCLUDES

- A. Work included: Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

1.2 RELATED SECTIONS

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of the Specifications.
- B. Additional procedures also may be prescribed in other Sections of these Specifications.

1.3 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.4 MANUFACTURER'S RECOMMENDATIONS

- A. Except as otherwise approved by the Engineer determine and comply with manufacturer's recommendations on product handling, storage, protection and installation.

1.5 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.
- B. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to manufacturer, grade, quality, and other pertinent information.

1.6 **PROTECTION**

- A. Protect finished surfaces, including jambs and soffits of openings used as passageways, through which equipment and materials are handled.
- B. Provide protection for finish floor surfaces in traffic areas prior to allowing equipment or materials to be moved over such surfaces.
- C. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.7 **REPAIRS AND REPLACEMENTS**

- A. In the event of damage, promptly make replacements and repairs to the approval of the Engineer and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the Contract Time of Completion.

END OF SECTION

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SECTION 02010

SUBSURFACE INVESTIGATION

1. GENERAL

1.1 DESCRIPTION

- A. Bidders should visit the site and acquaint themselves with existing conditions.
- B. Prior to bidding, bidders may make their own subsurface investigation to satisfy themselves as to site and subsurface conditions, but such investigations may be performed only under time schedules and arrangements approved in advance by the Engineer.

1.2 QUALITY ASSURANCE

- A. Readjust work performed that does not meet technical or design requirements, but make no deviation from the Contract Documents without specific and written approval from the Engineer.

END OF SECTION

SECTION 02020

SITE WORK

1. GENERAL

1.1 CLEARING AND GRUBBING

- A. All roots, stumps, and other perishable matter shall be removed to a depth of two feet (2') below existing ground in areas of fill or two feet (2') below the finished subgrade surface in areas of excavation. The entire area shall be cleared of heavy vegetation, grass, roots and other perishable material before excavation or fill is started. Any holes or depressions resulting from the removal of stumps, roots, etc. shall be immediately filled with acceptable material, and brought to the same degree of compaction as the surrounding area. Any trees, poles, structures, etc. designated for preservation shall be protected and left standing. The Contractor shall remove from the job site, and disposed of, all timber, stumps, roots, and objectionable material resulting from clearing and grubbing. All trees and shrubs scheduled for removal shall be removed under this section. No extra cost shall be allowed for tree removal unless otherwise shown on bid proposal.

END OF SECTION

SECTION 02151

SHORING AND BRACING OF EXCAVATIONS

1. GENERAL

1.1 DESCRIPTION

- A. Work included: Provide shoring at excavations and else where as required to protect workmen, materials, other properties, and the public.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. As established in the General Conditions of the Contract, the Contractor is solely responsible for means and methods of construction and for the sequences and procedures to be used.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Employ a professional engineer registered in the State of Florida, who is qualified to design the shoring system and to inspect and report on the quality of its construction. All plans must bear the signature and seal of this engineer.
- C. Comply with pertinent requirements of governmental agencies having jurisdiction, and with the Florida Trench Safety Act (See Section 00665).

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Prior to submitting shoring design for approval of governmental agencies having jurisdiction, submit the design to the Engineer for review.
 - 1. Should changes in the shoring design be required subsequent to the Engineers review, coordinate all such changes with the Engineer and secure the Engineer approval of changes in space allocations.

- C. Upon completion of construction of this portion of the Work, submit to the Engineer two copies of a letter signed by the approved shoring design engineer stating that, to the best of the shoring design engineer's knowledge, the shoring system was constructed in accordance with the arrangement reviewed by the Engineer.

2. PRODUCTS

2.1 DESIGN

- A. Design a shoring system which will safely and adequately prevent collapse of adjacent materials and which will permit construction of the Work to the arrangement shown on the Drawings.
- B. Secure all needed approvals, including those of governmental agencies having jurisdiction and of adjacent property owners if required, at no additional cost to the Owner.

2.2 MATERIALS

- A. Provide materials of all kinds as required for execution of the approved shoring system.

3. EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Construct and install the shoring system in strict accordance with the design approved by the governmental agencies having jurisdiction, and in strict accordance with the space arrangement approved by the Engineer.

END OF SECTION

SECTION 02201

EARTHWORK FOR UTILITY STRUCTURES

1. GENERAL

1.1 DESCRIPTION

- A. Work included: Excavation, backfilling and compaction for the installation of utility structures and related construction.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

- A. Codes and Standards: Perform excavation work in compliance with applicable requirements of authorities having jurisdiction.
- B. Testing and Inspection Services: Contractor shall employ and pay for a qualified independent geotechnical testing laboratory to perform soil testing and inspection service during earthwork operations.
- C. Testing Laboratory Qualifications: To qualify for acceptance, the geotechnical testing laboratory must demonstrate to the Engineer's satisfaction, based on evaluation of laboratory-submitted criteria conforming to ASTM E 699, that it has the experience and capability to conduct required field and laboratory geotechnical testing without delaying the progress of the Work.

1.3 SUBMITTALS

- A. Test Report: Submit the following reports directly to the Engineer from the testing services, with a copy to the Contractor:
 - 1. Verification of suitability of each footing sub-grade material, in accordance with specified the requirements.
 - 2. Field reports; in-place soil density tests.
 - 3. Report of actual unconfined compressive strength and/or results of bearing tests of each strata tested.

1.4 PROJECT CONDITIONS

- A. Site Information:
 - 1. Test borings and exploratory operations may be performed by Contractor, at the Contractor's option; however, no change in the Contract Sum will be authorized for such exploration.

- B. Existing Utilities: Locate existing underground utilities in areas of excavation of work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations.
 - 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult Engineer immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair any damaged utilities to the satisfaction of utility owner.
 - 2. Do not interrupt existing utilities serving facilities occupied by owner or others, during occupied hours, except when permitted in writing by the Engineer; and then only after acceptable temporary utility services have been provided.
 - 3. Provide a minimum of 48-hour notice to the Engineer, and receive written notice to proceed before interrupting any utility.
- C. Use of Explosives: Use of explosives is not permitted.
- D. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights.
 - 1. Operate warning lights as recommended by authorities having jurisdiction.
 - 2. Protect building structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 - 3. Perform excavation by hand within dripline of large trees to remain. Protect root systems from damage or dry-out to the greatest extent possible. Maintain moist conditions for root system and cover exposed roots with moistened burlap.

2. PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GW, GP, GM, SM, SW, and SP.
- B. Unsatisfactory soil materials are defined as those complying with ASTM D3487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.
- C. Sub-base Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, crushed slag, crushed limerock and natural or crushed sand.
- D. Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation and other deleterious matter.

3. EXECUTION

3.1 EXCAVATION

- A. Excavation is unclassified and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered. the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Excavation Classifications: The following classifications of excavation will be made when rock is encountered:
 - 1. Earth Excavation includes excavation of pavements and other obstructions visible on surface; underground structures, utilities, and other items indicated to be demolished and removed; together with earth and other materials encountered that are not classified as rock or unauthorized excavation.
 - 2. Rock excavation for trenches and pits includes removal and disposal of materials and obstructions encountered that cannot be excavated with a track mounted power excavator, equivalent to Caterpillar Model No. 215CLC, and rated at not less than 115 HP flywheel power and 32,000-pound drawbar pull and equipped with a short stick and a 42-inch wide, short tip radius rock bucket rated at 0.81 cubic yard (heaped) capacity. Trenches in excess of 10 feet in width and pits in excess of 30 feet in either length or width are classified as open excavation.
 - 3. Rock excavation in open excavations includes removal and disposal of materials and obstructions encountered that cannot be dislodged and excavated with modern, track-mounted, heavy-duty excavating equipment is defined as Caterpillar Model No. 973 or equivalent track-mounted loader, rated not less than 210 HP flywheel power and developing minimum of 45,000-pound breakout force (measured in accordance with SAE J732).
 - a. Typical of materials classified as rock are (boulders 1/2 cu. yd. or more in volume, solid rock, rock in ledgers, and rock-hard cementitious aggregate deposits.
 - b. Intermittent drilling, or ripping performed to increase production and not necessary to permit excavation of material encountered will be classified as earth excavation.

3.2 STABILITY OF EXCAVATIONS

- A. General: Comply with local codes, ordinances, and requirements of agencies having jurisdiction.
- B. Slope sides of excavations to comply with local codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

- C. Shoring and Bracing: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers, and shoring and bracing in excavations regardless of time period excavations will be open. Extend shoring and bracing as excavation progresses.

3.3 DEWATERING

- A. Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.
 - 1. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting structure bases, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
 - 2. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.

3.4 STORAGE OF EXCAVATED MATERIALS

- A. Stockpile excavated materials acceptable for backfill and fill where directed. Place, grade, and shape stockpiles for proper drainage.
- B. Dispose of excess excavated soil material and materials not acceptable for use as backfill or fill.

3.5 EXCAVATION FOR STRUCTURES

- A. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 foot, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, and other construction and for inspection.
 - 1. Excavations for footings and foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms of required lines and grades to leave solid base to receive other work.

3.6 BACKFILL AND FILL

- A. General: Place soil material in layers to the required subgrade elevations, for each area classification listed below, using materials specified in Part 2 of this Section.

- B. Backfill excavations as promptly as work permits, but not until completion of the following:
1. Acceptance of construction below finish grade including where applicable, damp proofing, waterproofing, and perimeter insulation.
 2. Removal of concrete formwork.
 3. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in a manner to prevent settlement of the structure or utilities, or leave in place if required.
 4. Removal of trash and debris from excavation.
 5. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

3.7 **PLACEMENT AND COMPACTION**

- A. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.
1. When existing ground surface has a density less than that specified under "Compaction" for a particular area classification, break up the ground surface, pulverize, moisture-condition to optimum moisture content, and compact to the required depth and percentage of maximum density.
- B. Place backfill and fill materials in layers not more than 6 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- C. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to the required percentage of maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy.
- D. Place backfill and fill materials evenly adjacent to structures, piping, or conduit to the required elevations. Prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift.

- E. Control soil and fill compaction, providing a minimum percentage of density as specified for each area classification indicated below. Correct improperly compacted areas or lifts as directed by the Engineer if soil density tests indicate inadequate compaction.
1. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum density, in accordance with AASHTO T-1800:
 - a. Under structures, (and pavements, compact top 12 inches of subgrade and each layer of backfill or fill material at 98 percent minimum density.
 2. Moisture Control: Where subgrade or a layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of the subgrade or layer of soil material. Apply water in minimum quantities as necessary to prevent free water from appearing on the surface during or subsequent to compaction operations.
 - a. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
 - b. Stockpile or spread soil material that has been removed because it is too wet to permit compaction. Assist drying by harrowing, or pulverizing until moisture content is reduced to a satisfactory value.

3.8 **GRADING**

- A. Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.
- B. Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes and as follows:
 1. Pavement: Shape surface of areas under pavement to line, grade, and cross-section, with the finished surface not more than 1/2 inch above or below the required subgrade elevation.
- C. Grading surface of fill under building slabs: Grade smooth and even, free of voids, compacted as specified, and to the required elevation. Provide final grades within a tolerance of 1/2 inch when tested with a 10-foot straight edge.
- D. Compaction: After grading, compact subgrade surfaces to the depth and indicated percentage of maximum or relative density for each area classification.

3.9**FIELD QUALITY CONTROL**

- A. Quality Control Testing during Construction: Allow testing service to inspect and approve each subgrade and fill layer before further backfill or construction work is performed.
1. Perform field density tests in accordance with ASTM D 1556 (sand cone method) or ASTM D 2167 (rubber balloon method), as applicable.
 - a. Field density tests may also be performed by the nuclear method in accordance with ASTM D 2922, providing that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D 1556. In conjunction with each density calibration check, check the calibration curves furnished with the moisture gages in accordance with ASTM D 3017.
 - b. If field tests are performed using nuclear methods, make calibration checks of both density and moisture gages at the beginning of the work, on each different type of material encountered, and at intervals as directed by the Engineer.
 2. Foundation Subgrade: For each strata of soil on which footings will be placed, perform at least one test to verify required design bearing capacities. Subsequent verification and approval of each foundation subgrade may be based on a visual comparison of each subgrade with related tested strata when acceptable to the Engineer.
 3. Paved Areas: In each compacted fill layer, perform one field density test for every 500 L.F. of overlaying or paved area, but in no case fewer than three tests.
 3. Foundation Wall Backfill: Perform at least two field density tests at locations and elevations as directed.
 5. If in the opinion of the Engineer, based on the testing service reports and inspections, subgrade or fills that have been placed are below the specified density, perform additional compaction and testing until the specified density is obtained.

3.10**EROSION CONTROL**

- A. Provide erosion control methods in accordance with requirements of authorities having jurisdiction.

3.11**MAINTENANCE**

- A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to the required density prior to further construction.
- D. Settling: Where settling is measurable or observable at excavated areas during the general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.12 DISPOSAL OF EXCESS AND WASTE MATERIAL

- A. Removal to Designated Areas on Owner's Property: Transport acceptable excess excavated material to designated soil storage areas on Owner's property. Stockpile soil or spread as directed by the Engineer.
- B. Removal from Owner's Property: Remove waste materials, including unacceptable excavated material, trash, and debris, and dispose of it off Owner's property.

END OF SECTION

SECTION 02221**TRENCHING, BEDDING, AND BACKFILL FOR PIPE****1. GENERAL****1.1 DESCRIPTION**

- A. Work included: The Contractor shall furnish all labor, equipment, and incidentals necessary to perform all excavation, backfill, fill, grading and slope protection required completing the piping work shown on the Drawings and specified herein. The work shall include, but not necessarily be limited to: manholes, vaults, duct conduit, pipe, roadways and paving; all backfilling, fill and required borrow; grading; disposal of surplus and unsuitable materials; and all related work such as sheeting, bracing, and water handling.
- B. Related Work:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 2. Section 02150: Shoring and Bracing
 3. Section 02201: Earthwork for Utility Structures
 4. Section 02576: Paving and Resurfacing

1.2 TRENCH PROTECTION

- A. A Contractor shall construct and maintain sheeting and bracing as required to support the sides of excavations, to prevent any movement which could in any way diminish the width of the excavation below that necessary for proper construction, and to protect adjacent structures, existing piping and/or foundation material from disturbance, undermining, or other damage. Care shall be taken to prevent voids outside of the sheeting, but if voids are formed they shall be immediately filled and rammed.
- B. For pipe trench sheeting, no sheeting is to be withdrawn if driven below mid-diameter of any pipe, and no wood sheeting shall be cut off at a level lower than 1 foot above the top of any pipe unless otherwise directed by the Engineer. If during the progress of the work the Engineer decides that additional wood sheeting should be left in place, he may direct the Contractor in writing. If steel sheeting is used for trench sheeting, removal shall be as specified above unless written approval is given by the Engineer for an alternate method of removal.

- C. All sheeting and bracing not left in place shall be carefully removed in such a manner as not to endanger the construction or other structures, utilities, existing piping, or property. All voids left or caused by withdrawal of sheeting shall be immediately refilled with sand by ramming with tools especially adapted to that purpose by watering or otherwise as may be directed.
- D. The right of the Engineer to order sheeting and bracing left in place shall not be construed as creating any obligation on his part to issue such orders, and his failure to exercise his right to do so shall not relieve the Contractor from liability for damages to persons or property occurring from or upon the work occasioned by negligence or otherwise, growing out of a failure on the part of the Contractor to leave in place sufficient sheeting and bracing to prevent any caving or moving of the ground.

1.3 JOB CONDITIONS

- A. The Contractor shall examine the site and review the available test borings or undertake his own soil borings prior to submitting his bid, taking into consideration all conditions that may affect his work. The Owner and Engineer will not assume responsibility for variations of sub-soil quality or conditions at locations other than places shown and at the time the investigations was made. Boring log data and soil samples are available for examination after signing a release at the office of the Engineer.
- B. Existing Utilities: Locate existing underground utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.
 - 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Engineer and the Owner for such piping or utility immediately for directions.
 - 2. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
- C. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights as recommended by authorities having jurisdiction.
 - 1. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

1.4 **SUBMITTALS**

- A. The Contractor shall furnish the Engineer, for approval, a representative sample of fill material obtained from onsite sources weighing approximately 50 pounds, at least ten calendar days prior to the date of anticipated use of such material.

- B. For each material obtained from other than onsite sources, the Contractor shall notify the Engineer of the source of the material and shall furnish the Engineer, for approval, a representative sample weighing approximately 50 pounds, at least ten calendar days prior to the date of anticipated use of such material.

2. **PRODUCTS**

2.1 **MATERIALS**

A. General:

1. Materials for use as base, fill and backfill shall be as described below:

- a. Satisfactory soil materials are defined as those complying with American Association of State Highway and Transportation Officials (AASHTO) M-145, soil classification Groups A-1, A-2-4, A-2-5, and A-3.

- b. Unsatisfactory soil materials are those defined in ASSHTO M-145 soil classification Groups A-2-6, A-2-7, A-6, and A-7 along with peat and other highly organic soils.

B. Structural Fill:

1. Structural fill material shall be satisfactory soil material consisting of a minimum of 60 percent clean medium to fine grain sized quartz sand, free of organic, deleterious and/or compressible material. Rock in excess of 2-1/2 inches in diameter shall not be used in the fill material. Structural fill shall not contain hardpan, stones, rocks, cobbles or other similar materials.

C. Common Fill:

1. Common fill material shall be satisfactory soil material containing no more than 20 percent by weight finer than No. 200 mesh sieve. It shall be free from organic matter, much, marl, and rock exceeding 2-1/2 inches in diameter. Common fill shall not contain broken concrete, masonry, rubble or other similar materials.

2. Material falling within the above specification, encountered during the excavation, may be stored in segregated stockpile for reuse. All material which, in the opinion of the Engineer, is not suitable for reuse shall be spoiled as specified herein for disposal of unsuitable materials.

D. Rock Bedding:

1. Rock bedding shall be 3/8" to 3/4" washed and graded limerock. This rock shall be graded so that 99% will pass a 3/4" screen and 80% will be retained on a No. 8 screen.

3. **EXECUTION**

3.1 **GENERAL**

- A. All excavation, backfill and grading necessary to complete the work shall be made by the Contractor and the cost thereof shall be included in the contract price.
- B. Material shall be furnished as required from off site sources and hauled to the site.
- C. The Contractor shall take all the necessary precautions to maintain the work area in a safe and workable condition.
- D. The Contractor shall protect his work at all times by flagging, marking, lighting and barricading. It shall also be the Contractor's responsibility to preserve and protect all above and underground structures, pipe lines, conduits, cables, drains or utilities which are existing at the time he encounters them. Failure of the Drawings to show the existence of these obstructions shall not relieve the Contractor from this responsibility. The cost of repair of any damage which occurs to these obstructions during or as a result of construction shall be borne by the Contractor without additional cost to the Owner.

3.2 **TRENCH EXCAVATION**

- A. Excavation for all trenches required for the installation of pipes and electrical ducts shall be made to the depths indicated on the Drawings. Excavate trench to provide a minimum of 20 inch clear cover over the pipe bell unless otherwise noted on the Drawings. Excavate in such manner and to such widths as will give suitable room for laying the pipe or installing the ducts within the trenches, for bracing and supporting and for pumping and drainage facilities. The trench width at the top of the pipe shall not exceed the allowable as determined by the depth of cut and indicated on the Drawings.
- B. Rock shall be removed to a minimum 8-inches clearance around the bottom and sides of all the pipe or ducts being laid.

- C. Where pipe or ducts are to be laid in lime rock bedding or encased in concrete the trench may be excavated by machinery to or just below the designated subgrade provided that the material remaining in the bottom of the trench is no more than slightly disturbed.
- D. Where the pipes or ducts are to be laid directly on the trench bottom, the lower parts of the trenches shall not be excavated to the trench bottom by machinery. The last of the material being excavated shall be done manually in such a manner that will give a flat bottom true to grade so that pipe or duct can be evenly and uniformly supported along its entire length on undisturbed material or bedding rock. Bell holes shall be made as required manually so that there is no bearing surface on the bells and pipes are supported along the barrel only.

3.3 PIPE INTERFERENCES AND ENCASEMENT

- A. The Contractor shall abide by the following schedule of criteria concerning interferences with other facilities.
 - 1. In no case shall there be less than 0.3 feet between any two pipe lines or between pipe lines and structures.
 - 2. Class I Concrete Encasement: Wherever there is more than 0.3 feet but less than 1.5 feet clearance between sewers, sewer house laterals, force mains and water mains or water services, then a concrete encasement shall be provided in accordance with the typical detail as shown on the Drawings.
 - 3. Class II Concrete Encasement: Wherever there is more than 0.3 feet but less than 1.0 feet clearance between any two pipe lines, or between pipe lines and structures, then a concrete encasement shall be provided in accordance with the typical detail as shown on the Drawings.
- B. The Engineer shall have full authority to direct the placement of the various pipes and structures in order to facilitate construction, expedite completion and to avoid conflicts.

3.4 BACKFILLING

- A. Backfilling over pipes shall begin as soon as practicable after the pipe has been laid, jointed, and inspected and the trench filled with suitable compacted material to the mid-diameter of the pipe.
- B. Backfilling over ducts shall begin not less than three days after placing concrete encasement.
- C. All backfilling shall be prosecuted expeditiously and as detailed on the Drawings.

- D. Any space remaining between the pipe and sides of the trench shall be packed full by hand shovel with selected earth, free from stones having a diameter greater than 2-inches and thoroughly compacted with a tamper as fast as placed, up to a level of one foot above the top of the pipe. Compact to 95% maximum density in layers not to exceed 4 inches up to the centerline of the pipe from the trench bottom and in layers not to exceed 4 inches up to the centerline of the pipe from the trench bottom and in layers not to exceed 6 inches from the pipe centerline to 12 inches above the pipe.
- E. The filling shall be carried up evenly on both sides with at least one many tamping for each man shoveling material into the trench.
- F. The remainder of the trench above the compacted Backfill, as just described above, shall be filled and thoroughly compacted with common fill by rolling, ramming, of puddling, as the Engineer may direct. Compact common fill in 6-inch layers to 98% maximum density.
- G. The bedding rock in much areas shall consists of at least 6 inches of washed and graded lime rock placed in the trench to the proposed elevation of the centerline of the pipe prior to any pipe lying. This bedding shall not be used under any circumstances as a drain for ground water. The Contractor shall take all precautions necessary to maintain the bedding in a compacted state and to prevent washing, erosion or loosening of this bed.
- H. In location where pipes pass through building walls, the Contractor shall take the following precautions to consolidate the refill up to an elevation of at least 1 foot above the bottom of the pipes:
 - 1. Place structural fill in such areas for a distance of not less than 3 feet on either side of the center line of the pipe in level layers not exceeding 6-inches in depth.
 - 2. Wet each layer to the extent directed and thoroughly compact each layer with a power tamper to the satisfaction of the Engineer.

3.5

GRADING

- A. Grading shall be performed at such places as are indicated on the Drawings, to the lines, grades, and elevations shown or as directed by the Engineer and shall be made in such a manner that the requirements for formation of embankments can be followed. All unacceptable material encountered, of whatever nature within the limits indicated, shall be removed and disposed of as directed. During the process of excavation, the grade shall be maintained in such condition that it will be well drained at all times. When directed, temporary drains and drainage ditches shall be installed to intercept or divert surface water which may affect the prosecution or condition of the work.

- B. If at the time of excavation it is not possible to place any material in its proper section of the permanent structure, it shall be stockpiled in approved areas for later use. No extras will be considered for stockpiling or double handling of excavating material.
- C. The right is reserved to make minute adjustments or revisions in lines or grades if found necessary as the work progresses, due to discrepancies on the Drawings or in order to obtain satisfactory construction.
- D. Stones or rock fragments larger than 2-1/2 inches in their greatest dimensions will not be permitted in the top 6 inches of the subgrade line of all dikes, fills or embankments.
- E. All fill slopes shall be uniformly dressed to the slope, cross-section and alignment shown on the Drawings, or as directed by the Engineer.
- F. In cuts, all loose or protruding rocks on the back slopes shall be barred loose or otherwise removed to line or finished grade of slope. All cut and fill slopes shall be uniformly dressed to the slope, cross-section and alignment shown on the Drawings or as directed by the Engineers.
- G. No grading is to be done in areas where there are existing pipe lines that may be uncovered or damaged until such lines which must be maintained are relocated, or where lines are to be abandoned, all required valves are closed and drains plugged at manholes.
- H. The Contractor shall replace all pavement cut or otherwise damaged during the progress of the work as specified elsewhere herein.

3.6 DISPOSAL OF UNSUITABLE AND SUPPLY MATERIAL

- A. All surplus and/or unsuitable excavated material shall be disposed of in one of the following ways as directed by the Engineer.
 - 1. Transport to soil storage area on Owner's property and stockpile or spread as directed by the Engineer.
 - 2. Transport from Owner's property and legally dispose of. Any permit required for the hauling and disposing of this material beyond Owner's property shall be obtained prior to commencing hauling operations.
- B. Suitable excavated material may be used for fill if it meets the specifications for common fill and is approved by the Engineer. Excavated material so approved may be neatly stockpiled at the site where designated by the Engineer provided there is an area available where it will not interfere with the operation of the facility nor inconvenience traffic or adjoining property owners.

END OF SECTION

SECTION 02223

EXCAVATION BELOW NORMAL GRADE AND GRAVEL REFILL

1. GENERAL

1.1 DESCRIPTION

- A. If in the opinion of the Engineer, the material at or below the normal grade of the bottom of the trench (0.7-feet below the invert of the pipe) is unsuitable for foundation, it shall be removed to the depth directed by the Engineer and replaced by drain rock, at no additional cost to the Owner.
- B. Related Work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Section 02221: Trenching, Bedding and Backfill for Pipe.

2. PRODUCTS

2.1 MATERIALS

- A. Drain rock shall be 3/8-inch to 3/4-inch washed and graded lime rock. The rock shall be graded so that 99% will pass a 3/4-inch screen and 80% will be retained on a No. 8 screen.

3. EXECUTION

3.1 EXCAVATION AND DRAINAGE

- A. Whatever the nature of unstable material encountered or the groundwater conditions, trench drainage shall be complete and effective.
- B. If the Contractor excavates below grade through error or for his own convenience, or through failure to properly dewater the trench, or disturbs the subgrade before dewatering is sufficiently complete, he may be directed by the Engineer to excavate below grade as set forth in the preceding paragraph, in which case the work of excavating below grade and finishing and placing the refill shall be performed at the Contractors own expense.

3.2

REFILL

- A. If the material at the level of trench bottom consists of fine sand, sand and silt or soft earth which may work into the drain rock notwithstanding effective drainage, the subgrade material shall be removed to the extent directed and the excavation refilled with coarse sand, or a mixture graded from coarse sand to fine pea stone, to form a filter layer preserving the voids in the gravel bed of the pipe. The composition and gradation of gravel shall be approved by the Engineer prior to placement. Gravel shall be placed in 6-inch layers thoroughly compacted. If directed by the Engineer, drain rock shall be used for refill of excavation below grade.

END OF SECTION

SECTION 02576

PAVING AND RESURFACING

1. GENERAL

1.1 DESCRIPTION

A. The work of this section includes, but is not limited to:

1. Temporary Paving
2. Permanent Paving

B. Related Work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

A. Referenced Standards:

1. Florida Department of Transportation Standard Specifications for Road and Bridge Construction Latest Edition, including Supplements.

1.3 SUBMITTALS

A. Certificates:

1. Submit certification from bituminous and aggregate suppliers attesting that materials conform to the Controlling Agency Specifications.

1.4 JOB CONDITIONS

A. Control of Traffic:

1. Take measures to control traffic during repaving operations. Do not allow traffic on repaved areas until authorized by the Engineer.
2. Employ traffic control measures necessary to maintain and to protect traffic, to protect the work in progress, to protect adjacent property from excess dust resulting from the construction area and to maintain traffic through, around, or adjacent to the construction area. The work shall include the furnishing and maintaining of all traffic control devices, flaggers, construction of temporary structures when required, labor, equipment and materials to keep the traveled road smooth and the furnishing and application of dust palliatives.

- B. Restore existing paving outside the limits of the work that is damaged by the contractor's operations to its original condition at the expense of the Contractor.

2. **PRODUCTS**

2.1 **FLEXIBLE PAVEMENT MATERIALS AND AGGREGATES**

- A. Bituminous Treatments, surface courses and concrete pavements shall conform to Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition. Thickness shall be a minimum of 1 inch of Type S-3 Asphaltic Concrete Pavement, unless otherwise noted on plans.
- B. Refer to Section 300, Florida Department of Transportation Specifications, Latest Edition. All bituminous materials and aggregates used in paving and resurfacing are designated in these specifications and shall conform to the applicable portions of the State specifications.

3. **EXECUTION**

3.1 **TEMPORARY PAVING**

- A. Place temporary paving immediately upon completion of trench back-filling. Unpaved trenches shall not remain unpaved longer than one working day after back-filling.
- B. Shape and compact subgrade material, then place and compact crushed stone base course to the required thickness.
- C. Place temporary paving material. Compact to required minimum thickness with trench roller having minimum 300 pounds per inch-width of compaction roll.
- D. Continuously maintain temporary paving to the satisfaction of the Engineer and the state and local road departments.
- E. Remove and dispose of temporary pavement prior to the placement of permanent pavement.

3.2 **PERMANENT PAVING**

- A. Excavate to the lines and grades on plans to receive permanent pavement, including the disposal of surplus excavated material. Remove all muck and organic materials.
- B. Remove temporary paving material. Construct permanent base and surface courses to the required compacted thickness shown on the plans in accordance with Florida Department of Transportation Standards for Road and Bridge Construction.
- C. Trim existing paving to remove damaged areas. Cut straight joint lines and right angle offsets.

- D. Maintain permanent paving to the satisfaction of the Engineer and the local and state road departments throughout the contract maintenance period.

3.3 BITUMINOUS OVERLAY

- A. Where indicated on the drawings, standard details, or directed by the engineer, place a bituminous overlay.
- B. Construct in accordance with Florida Department of Transportation Standards for Road and Bridge Construction.

3.4 DRIVEWAYS

- A. Trim concrete and bituminous driveway surfaces to remove damaged areas. Saw cut straight joint lines parallel to the centerline of the trench. Cut offsets at right angles to the trench centerline.
- B. Restore existing concrete driveways trenched through with a 6" layer of concrete reinforced with 6 x 6 10/10 wire mesh.
- C. Restore existing asphalt driveways trenched through in kind or with minimum 1" layer wearing course over 12" layer of D.O.T. road rock.
- D. Restore earth driveways with a 6" layer of 3/4" stone backfill. Florida DOT 901-6 No. 14.
- E. Restore brick driveways with like brick placed on a 4" thick wet sand bed. Place bricks in like pattern and spacing.

3.5 CONCRETE CURB AND SIDEWALK REPAIRS

- A. Replace curbs and sidewalks damaged by construction to match existing.
- B. Reconstruct curbs and sidewalks to the first expansion joint on either side of the damaged portion. Install preformed expansion joint material.
- C. Sidewalks shall be new construction for the full width of the existing slabs.
- D. Reconstruct sidewalks to 4 inch thickness of Class I concrete placed on a 4 inch base of compacted material.
- E. Sidewalks and curbs materials and construction methods shall be in accordance with Sections 522 and 520 of the referenced Florida Department of Transportation Specifications.

END OF SECTION

SECTION 02576A**THERMOPLASTIC TRAFFIC STRIPES AND MARKINGS****711-1 DESCRIPTION**

Apply new thermoplastic traffic stripes and markings, or refurbish existing thermoplastic traffic stripes and markings, in accordance with the Contract Documents.

711-2 MATERIALS

711-2.1 **Thermoplastic:** Use only thermoplastic materials listed on the QPL. The Engineer will take random samples of all material in accordance with the Departments Sampling, Testing and Reporting Guide Schedule.

711-2.1.1 **Initial or Recapped Stripes and Markings:** Use materials meeting the requirements of 971-1 and 971-5.

711-2.1.2 **Refurbishing Existing Stripes and Markings:** Use materials meeting the requirements of 971-1 and 971-5.

711-2.1.3 **Prefomed Stripes and Marking:** Use materials meeting the requirements of 971-1 and 971-6.

711-2.2 **Glass Spheres:** Use only glass spheres listed on the QPL, meeting the requirements of 971-1 and 971-2. The Engineer will take random samples of all glass spheres in accordance with ASH-1 D 1214 and the Department's Sampling, Testing and Reporting Guide schedule.

711-2.3 Sand: Use materials meeting the requirements of 971-5.4.

711-3 EQUIPMENT

Use equipment capable of providing continuous uniform heating of striping materials to temperatures exceeding 390°F, mixing and agitation of the material reservoir to provide a homogeneous mixture without segregation. Use equipment that will maintain the striping material in a plastic state, in all mixing and conveying parts, including the line dispensing device until applied. Use equipment which can produce varying width traffic stripes and which meets the following requirements:

- A. Capable of traveling at a uniform, predetermined rate of speed, both uphill and downhill, in order to produce a uniform application of striping material and capable of following straight lines and making normal curves in a true arc.
- B. Is capable of applying glass spheres to the surface of the completed stripe by a

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double drop application for initial traffic striping and marking and a single drop application for recapping and refurbishing. The bead dispenser for the first bead drop shall be attached to the striping machine in such a manner that the beads are dispensed closely behind with the thermoplastic material. The second bead dispenser bead shall be attached to the striping machine in such a manner than the beads are dispensed immediately after the first bead drop application. Glass sphere dispensers shall be equipped with an automatic cut-off control that is synchronized with the cut-off of the thermoplastic material and applies the glass spheres in a manner such that the spheres appear uniform on the entire traffic stripes and markings surface with, 50 to 60% embedment.

- C. Equipped with a special kettle for uniformly heating and melting the striping material. The kettle must be equipped with an automatic temperature control device and material thermometer for positive temperature control and to prevent overheating or scorching of the thermoplastic material.
- D. Meet the requirements of the National Fire Protection Association, state, and local authorities.

711-4 APPLICATION

711-4.1 **General:** Remove existing pavement markings such that scars or traces of removed markings will not conflict with new stripes and markings by a method approved by the Engineer. Cost for removing conflicting pavement markings during maintenance of traffic operations to be included in Maintenance of Traffic, Lump Sum.

Before applying traffic stripes and markings, remove any material by a method approved by the Engineer that would adversely affect the bond to the traffic stripes. Before applying traffic stripes to any portland cement concrete surface, apply a primer, sealer or surface preparation adhesive of the type recommended by the manufacturer. Offset longitudinal lines at least 2 inches from any longitudinal joints of portland cement concrete pavement.

Apply traffic stripes or markings only to dry surfaces, and when the ambient air and surface temperature is at least 60°F and rising for asphalt surfaces and 60°F and rising for concrete surfaces.

Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and markings over existing markings, ensure that no more than 2 inches on either end and not more than 1 Inch on either side of the existing line is visible.

Apply thermoplastic material to the pavement either by spray,

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extrusion or other means approved by the Engineer.

Conduct field tests in accordance with FM 5-541. Take test readings representative of the striping performance. Remove and replace traffic stripes and markings not meeting the requirements of this Section at no additional cost to the Department.

Apply all final pavement markings prior to opening the road to traffic.

711-4.1.1 **Preformed Thermoplastic:** Apply markings only to dry surfaces and when ambient air temperature is at least 32°F. Prior to installation, follow the manufacturer's recommendations for pre-heating

711-4.2 **Thickness**

711-4.2.1 **Initial or Recapped Stripes and Markings:** Apply or recap traffic stripes or markings such that all lane lines, center lines, transverse markings and traffic stripes and markings within traffic wearing areas, will have a thickness of 0.10 to 0.15 inch when measured above the pavement surface.

Also, all gore, island, and diagonal stripe markings, bike lane symbols and messages, where ever located, will have a thickness of 0.09 to 0.12 inch when measured above the pavement surface. Measure, record and certify on Department approved form and submit to the Engineer, the thickness of white and yellow pavement markings in accordance with FM 5-541.

711-4.2.2 **Refurbishing Existing Traffic Stripes and Marking:** Apply a minimum of 0.06 inch of thermoplastic material. Ensure that the combination of the existing stripe and the overlay after application of glass spheres does not exceed the maximum thickness of 0.150 inch for all inches.

711-4.3 **Retro reflectivity:** Apply white and yellow traffic stripes and markings that will attain an initial retro reflectivity of not less than 450 mcd/lx•m² and not less than 350 mcd/lx•m², respectively for all longitudinal lines. All transverse lines, messages and arrows will attain an initial retro reflectivity of not less than 300 mcd/lx ·m² and 250 mcd/lx•m² for white and yellow respectively. All pedestrian crosswalks, bike lane symbols or messages in proposed bike lane shall attain an initial retro reflectivity of not less than 275 mcd/lx•m².

Measure, record and certify on Department approved form and submit to the Engineer, the retro reflectivity of white and yellow

pavement markings in accordance with FM 5-541.

711-4.4 Glass Spheres:

711-4.4.1 **Longitudinal lanes:** For initial traffic striping and marking, apply the first drop of Type 4 or larger glass spheres immediately followed by the second drop of Type I glass spheres.

For refurbishing, apply a single drop of Type 3 glass spheres, Apply reflective glass spheres to all markings at the rates determined by the manufacturer's recommendations.

711-4.4.2 **Transverse Stripes and Markings:** Apply a single drop of Type I glass spheres. Apply reflective glass spheres to all markings at the rates determined by the manufacturer's recommendations.

Apply a mixture consisting of 50% glass spheres and 50% sharp silica sand to all thermoplastic pedestrian crosswalk lines and bike lane symbols at the rates determined by the manufacturer's recommendations.

711-4.4.3 **Preformed Markings:** These markings m-e factory supplied with glass spheres and skid resistant material. No additional glass spheres or skid resistant material should be applied during installation.

711-5 **CONTRACTOR'S RESPONSIBILITY FOR NOTIFICATION**

Notify the Engineer prior to the placement of the thermoplastic materials. Furnish the Engineer with the manufacturer's name and batch numbers of the thermoplastic materials and glass spheres to be used. Ensure that the approved batch numbers appear on the thermoplastic materials and glass spheres package.

711-6 **PROTECTION OF NEWLY APPLIED TRAFFIC STRIPES AND MARKINGS**

Do not allow traffic onto or permit vehicles to cross newly applied pavement markings until they are sufficiently dry. Remove and replace any portion of the pavement markings damaged by passing traffic or from any other cause, at no additional cost to the Department.

711-7 **OBSERVATION PERIOD**

Longitudinal pavement markings are subject to a 180 day observation period under normal traffic. The observation period shall begin with the satisfactory completion and acceptance of the work.

The longitudinal pavement markings shall show no signs of failure due to blistering, excessive cracking, chipping, discoloration, and poor adhesion to the pavement, loss of reflectivity

or vehicular damage. The retro reflectivity shall meet the initial requirements of 711-4.3. The Department reserves the right to check the color and retro reflectivity any time prior to the end of the observation period.

Replace at no additional expense to the Department, any longitudinal pavement markings that do not perform satisfactorily under traffic during the 180 day observation period.

711-8 CORRECTIONS FOR DEFICIENCIES

Recapping applies 10 conditions where additional striping material is applied 10 new or refurbished traffic stripes or markings to correct a deficiency. Recap a 1.0 mile section centered on the deficiency with additional striping material or by complete removal and reapplication at no additional cost to the Department.

If recapping will result in a thickness exceeding the maximum allowed, the traffic stripes or markings will be removed and reapplied.

7 11-9 SUBMITTALS

711-9.1 **Submittal Instructions:** Prepare eleven (11) certification of quantities, using the Department's current approved form, for each project in the contract. Submit the certification of quantities and daily worksheets to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.

711-9.2 **Contractor's Certification of Quantities:** Request payment by submitting a certification of quantities no later than 12:00 noon, Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:

- A. Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.
- B. The basis for arriving to the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.

711-10 METHOD OF MEASUREMENT

The quantities to be paid for under this Section will be as follows:

- A. The length in net miles, of 6 inch solid traffic stripe, authorized and acceptably applied.

- B. The total traversed distance in gross miles of 10-30 or 3-9 skip line. The actual applied line is 25% of the traverse distance, for a 1:3 ratio. This equates to 1,320 feet of marking per mile of single line.
- C. The net length, in feet of all other types of lines and stripes, authorized and acceptably applied.
- D. The area, in square feet, of removal of existing, pavement markings, acceptably removed.
- E. The number of pavement messages, symbols and directional arrows, authorized and acceptably applied.

7 11-11 BASIS OF PAYMENT

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic. Furnishing of all tools, machines and equipment, and not incidentals necessary to complete the work Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

Item No. 711- Thermoplastic

Traffic Stripes, Solid - per net mile

Traffic Stripes, Solid - per foot

END OF SECTION

SECTION 03250

**CAST-IN-PLACE CONCRETE
SIDEWALKS, CURBS, CURBS & GUTTERS, CROSSWALKS
AND MISCELLANEOUS CONCRETE**

1. GENERAL

1.1 DESCRIPTION

- A. Work included: Provide cast-in-place concrete, sidewalks, curbs, curbs and gutters, crosswalks and miscellaneous concrete, where shown on the Drawings as specified herein, and as needed for a complete and proper installation.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section. The concrete curb and sidewalk contractor/sub-contractor shall have a minimum of 5 years of experience in the construction of urban and decorative sidewalks.
- B. Quality control:
 - 1. See requirements for testing as stated in part 3 of this Section.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.

1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01640.

2. PRODUCTS

2.1 CONCRETE MIXES

- A. Provide a mix design prepared by the approved testing agency, based on strengths of the approved materials, and meeting the requirements stated on the Drawings, and Specifications.
 - 1. Secure the Engineers approval of each mix design, including new mix designs required to be prepared should there occur a change in materials being used.

2.2 CONCRETE QUALITY

- A. Concrete shall be Class I normal weight, and shall attain a 28-day compressive strength of a minimum of 3000 psi.
 - 1. The maximum water-cement ratio shall be 0.65.
 - 2. The minimum cement content for concrete shall be five bags per cubic yard.
 - 3. Concrete shall contain a water reducing admixture capable of increasing workability and reducing the amount of mixing water, conforming to ASTM C494-82, Type A. Other admixtures may be used if approved by the Engineer. Admixtures shall be added to the mix in accordance with the manufacturer's specifications, and at a controlled rate.

2.3 COLORING

- A. Integral Colored Concrete mixture shall be Class I concrete, as described above.

Concrete shall be supplied with the color admixture added. Admixture coloring, as specified in drawings, shall be plant mixed and shall be manufactured by the Lambert Corporation or an approved equal.

3. EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 SUBGRADE PREPARATION

- A. All roots, vegetation and other deleterious materials shall be removed from the area of the proposed sidewalk. Roots, when present, shall be removed to a depth of 12". Existing rock shall be removed to at least 1" below proposed subgrade elevation. Fill materials, where required, shall be clean lime rock or mixture of lime rock and sand acceptable to the Engineer. Subgrade shall be compacted to a minimum field density of 95% of the maximum density as determined by AASHTO Method, Designation T180-74, and Method D.

3.3

FORMS

- A. General: Steel forms shall be used for all work except at sidewalk radii where wood forms (1/4" min. thickness) may be used and which shall be bent to a smooth uniform curve. Wood forms shall not be used for Curb or Curb & Gutter work. Forms shall be as follows: (a) externally secured and braced where feasible; (b) substantial and unyielding; (c) of adequate strength to contain the concrete without building between supports and without apparent deviation from the neat lines, contours and shapes shown in the plans. They shall be designed to withstand the additional forces of vibration without apparent deviation from the desired shape or position. Assembled forms shall be mortar tight and, shall be constructed to render a concrete surface of smooth, uniform finish. Provisions shall be made for the removal of forms without injury to concrete surfaces. Blocks and bracing shall be removed from the forms and in no case shall any portion of the forms be left in the concrete.

The Contractor where practical may use asphalt abutting the sidewalk in lieu of form work. The asphalt must be saw cut in such a manner that the edge of the sidewalk where it abuts the asphalt is true to grade and alignment.

The form shall be set plumb, properly aligned, and with their bottom in full and continuous contact with the subgrade. Forms shall be cleaned and lightly oiled before concrete is placed.

- B. Form Alignment, Bracing and These: Forms shall be constructed in such manner that they may be adequately secured for alignment, shape and grade. Bracing systems, ties and anchorages used for this purpose shall be substantial and sufficient to insure against apparent deviation from shape, alignment and grade. Nails driven into existing concrete shall not be used for this purpose. Bracing systems, ties anchorages shall not be used which will unnecessarily deface or mark, or have an injuries or undesirable effect on surfaces which will be a part of the finished surface.
- C. Preparation and Cleaning: The condition of the forms shall meet the following requirements at the time concrete casting is begun: (a) All forms shall be treated with an approved form-release agent before placing concrete. Material which will adhere to, or disorder the concrete shall not be used. (b) The forms shall be

cleaned of all dirt, sawdust, shavings and other debris. (c) All inspection and cleanout holes shall be closed and secured.

3.4 CONCRETE MIXING

- A. Job mixed concrete shall not be permitted.
- B. Ready-mixed concrete shall be mixed and delivered in accordance with the requirements of the Standard Specification for Ready-Mixed Concrete, ASTM C94- 85.
- C. No concrete shall be re-tempered after it has not taken an initial set nor shall any batch or portion thereof be deposited in forms more than one and one-half hours after the mixing of that particular batch has commenced.
- D. No water shall be added at the job site to concrete delivered by truck as ready for use without the approval of the Engineer, and then, only when slump tests are made and the concrete so delivered is known to be of less than the slump specified.
- E. Concrete consistency:
 - 1. Use the amount of water established by the approved mix design.
 - a. Do not exceed the maximum quantity specified for the grade of concrete.
 - b. Use the minimum amount of water necessary to produce concrete of the workability required by the Engineer.
 - c. Do not supplement the predetermined amount of water with additional water for any reason.
 - 2. Measure concrete consistency by ASTM C143 method.
 - a. As part of the routine testing and inspecting, test twice each day or partial day's run of the mixer.
 - b. Maintain a complete and accurate record of tests.
 - 3. Provide a 3" maximum concrete slump.
- F. Miscellaneous provisions:
 - 1. Provide strengths of concrete as shown on the Drawings.

2. Provide concrete dense and free from honeycomb and other defects.
3. Place and finish members to conform to the shapes and dimensions indicated, with all surfaces true to line, plumb, and level.

3.5 CONCRETE REINFORCEMENT

- A. Provide reinforcement as detailed on Drawings and Specifications.

3.6 CONVEYING AND PLACING CONCRETE

- A. Inspection: No concrete shall be placed until inspected for depth, forming and reinforcement. Proper finishing tools shall be on the jobsite at time of inspection. Failure to obtain required inspection shall be sufficient cause for rejection. Such inspection and approval shall not relieve the contractor of the responsibility of obtaining satisfactory concrete surfaces, free from warping, bulging or other objectionable defects. Special attention shall be paid to the ties and bracing. Where the forms appear to be insufficiently braced or unsatisfactorily built, the progress of the work shall be stopped until the defects have been corrected to the satisfaction of the Engineer.

- B. Preparation:

1. Remove all laitance, oil, and loose particles from concrete and concrete surfaces, and thoroughly clean the forms with water under stiff pressure.
2. Remove laitance after concrete has hardened partially (not less than two hours nor more than four hours after place in) by brushing with stiff bristles, or by directing a stream of water from a 1/4" nozzle, or by other method approved by the Engineer, to expose the clean top surface of the coarse aggregate.
3. Where cleaning is not satisfactory to the Engineer sandblast the surface and then wash again.

- C. Method of Depositing

1. Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to handling or flowing. The concrete shall be carried on at such a rate that the concrete is at all times plastic and flows readily. No concrete that has been contaminated by foreign materials shall be deposited on the work.
2. When concreting is started, it shall be carried on as a continuous operation until the placing of the panel or section is completed. The

top surface shall be generally level.

3. All concrete shall be thoroughly compacted by suitable means during the operation of placing, and shall be thoroughly worked, into corners.
4. Place concrete only under the degree of inspection described elsewhere in these Specifications, and as required by governmental agencies having jurisdiction.
5. Do not place concrete outside of regular working hours unless required inspection authorities have been notified properly and are present.
6. Concrete shall be pump-mix.
7. Deposit concrete so that the surface is kept level throughout, a minimum being permitted to flow from one position to another, and place as rapidly as practicable after mixing.
8. Do not use in this Work any concrete not placed within 30 minutes after leaving the mixer.

D. Adverse Weather:

1. The Contractor shall assume all risks connected with the placing of concrete during adverse weather conditions, and permission given to place concrete under such conditions will in no way relieve the Contractor of the responsibility for satisfactory results. Should concrete placed under such conditions, prove unsatisfactory, it shall be removed, disposed of and replaced at the Contractor's expense.

3.7 FINISHING

- A. Exposed work shall have a steel trowelled finish after which it shall be lightly broomed to eliminate a slick finish. After forms have been removed from exposed areas, all voids shall be filled and rubbed where necessary using color compound to give the face a finished look. All laitance and slop-over shall be thoroughly removed from any adjacent surfaces before the final finishing process is completed.

3.8 EDGES AND JOINTS

- A. Edges of all sidewalks shall be finished with one-quarter inch (1/4") radius joint and edging tools. Edges of curbs shall be to the radius shown on typical section.

- B. Joints in sidewalks shall be spaced uniformly equal to width of sidewalk except where sidewalk exceeds six feet (6') in which case the uniform spacing shall be one-half width with a longitudinal joint at mid-width. All such joints shall be formed with tool having a bit depth of one and one-half inches (1-1/2") as approved by the City and shall have a minimum tooled radius of one-quarter inch (1/4") each side.

At spacing of twenty feet (20') maximum (or nearest multiple of required joint spacing) there shall be an open joint one-quarter inch (1/4"), minimum, wide and full depth of sidewalk which may be formed with removable spline but having edges tooled to a one-quarter inch radius. Expansion joints or saw cutting can only be used where approved in writing.

An open joint shall be provided where new sidewalk abuts existing. A longitudinal joint parallel to curb poured monolithic with the sidewalk shall be tooled to a minimum depth of one-quarter inch and with a one-quarter inch radius each side. Joints in curbs or curbs and gutters shall be at a maximum spacing of ten feet (10') or a minimum spacing of four feet (4') and formed with a one-quarter inch thick steel template of proper contour and with exposed edges tooled to a one-quarter inch radius.

- C. Expansion material must be used between the back of curb (or curb and gutter) and sidewalk, between concrete driveway and sidewalk, between any existing vertical surface (except existing sidewalk) and sidewalk and between root barriers and sidewalk. Expansion joints shall be a maximum of 1/2" thick and the expansion material shall be cut one-eighth inch (1/8") below the surface at the proposed sidewalk curb or gutter.

- D. When specified on the plans or requested by the Contractor and approved by this department, saw-cutting of sidewalks, curb or gutter shall be done as follows:

1. All joints shall be formed (at wearing surface) with tool having a bit of at least one-half inch (1/2") deep and radius of one-quarter (1/4") each side.
2. Open joints where required shall be saw cut the full depth of sidewalk, curb or gutter.
3. Intermediate joints at spacing required shall be saw cut a minimum depth of one and one-half inch (1-1/2").
3. Saw blades used shall not be less than one-eighth inch (1/8") nor more than one-quarter (1/4") thick and shall not be allowed to deviate from a straight line, but such joints shall be clean cut and uniform in width with tooled edges at surface remaining undamaged.

4. Open joints shall be saw cut within forth-eight(48) hours and intermediate joints with twenty-four (24) hours after finishing.
- E. Concrete sidewalks which are part of driveways and approaches shall have joint spacing to match adjoining sidewalk.

3.9 CURING

- A. Concrete shall be cured by use of a clear compound compatible with the coloring compound and in accordance with manufacturer's recommendations. Submit the proposed material and method for approval prior to use.
- B. Care shall be used in the use of water or plastic membranes as their use may have an adverse effect on the coloring compound and/or finish.

3.10 DEFECTIVE CONCRETE

- A. The following concrete will be deemed to be defective, and shall be removed promptly from the job site.
 1. Concrete which is not formed as indicated, is not true to intended alignment, is not plumb or level where so intended, is not true to intended grades and levels;
 2. Has voids or honeycomb that have been cut, resurfaced, or filled, unless with the approval of the Architect;
 3. Has sawdust, shavings, wood, or embedded debris;
 4. Or does not conform fully to provisions of the Contract Documents.
- B. Repairs and replacement
 1. Defective concrete may be cut out and repaired with gunite, or other approved methods, when and as directed by the Engineer.
 2. Where defective concrete is found after removal of the forms, cut out the defective concrete, if necessary, and make the surfaces match adjacent surfaces.
 3. Work uneven surfaces and angles of concrete to a surface matching adjacent concrete surfaces.

3.11 TESTING

- A. The Engineer shall have the right to order tests on any material entering into concrete or reinforced concrete to determine its suitability for the proposed purpose. To order reasonable tests of the concrete from time to time to determine whether the materials and methods in use are such as to produce concrete of the necessary quality; and to order the test under load of any portion of the structure, when conditions have been such as to leave doubt as to the adequacy of the structure to serve the purpose for which it is intended.
- B. Tests of materials and of concrete shall be in accordance with the requirements of the American Society for Testing Materials. Test shall be made by a testing laboratory approved by the Engineer. Test reports shall be submitted to the Engineer. The costs of such tests resulting from construction related problems shall be assumed by the Contractor.
- C. Tests on concrete used in construction shall be made by an approved testing laboratory, and reports submitted to the Engineer. The costs of such tests shall be assumed by the Contractor.
 - 1. Not less than three specimens shall be made for each standard test, nor less than one test for each 50 cubic yards of concrete used on the project.
 - 2. Specimens shall be made and cured in accordance with the Standard Method of Making and Curing Concrete Compression and Flexure Test Specimens in the Field, ASTM C31-84.
 - 3. Specimens shall be tested in accordance with the Standard Method of Test for Compression Strength of Molded Concrete Cylinders, ASTM C39-84. Reports to the Engineer shall be submitted for each test performed.
 - 4. Test cylinders taken off truck-mixed concrete shall be taken at the approximate one-quarter point and the three-quarter point of the load.
- D. The age for strength tests of concrete shall be 28 days. Strength tests for an earlier age shall be submitted if the Engineer has approved concrete in the structure to receive its full working loads at such earlier time. Seven day tests may be used with the approval of the Engineer, provided that the relation between the seven and 28-day strengths of the concrete is established by tests for the materials and proportions used.
- E. To conform to the requirements of these specifications, the average strength of the laboratory cured cylinders representing each class of concrete as well as the average of any five consecutive strength tests representing each class of concrete shall be equal to or greater than the specified strength and not more than one strength test in ten shall have an average value of less than 90 percent of the specified strength.
- F. When there is a question as to the quality of the concrete in the structure, the

Engineer shall have the right to require core tests in accordance with the Standard Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete, ASTM C42-84a, to order load tests on that portion of the structure where the questionable concrete has been placed, or to require other reasonable tests to evaluate the strength of the structure.

END OF SECTION

APPENDIX "A"
SUPPLEMENTAL TECHNICAL SPECIFICATIONS

GENERAL SCOPE OF WORK –

- A. Any disturbed swale areas, private property; other public property shall be re-sodded per Sod Specifications and graded properly as per specifications at the Contractor's expense.

- B. Any damage to the roadway, driveway approaches, driveways, abutting sidewalks, aprons surrounding catch basins, manholes, etc. shall be repaired at no expense to the Town, if determined by the Town to be repairs due to negligence or lack of coordination on the part of the Contractor. Re-paving shall be per Pavement Specifications and Miami-Dade County Public Works Manual.

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REPLACEMENT & INSTALLATION OF SIDEWALKS TEMPORARY FACILITIES

SECURITY

- A. The contractor is responsible for project security. Contractor shall protect and secure the site, materials, and equipment from theft and damage, by whatever means deems effective, at contractor's cost.
- B. Work site(s) must be protected properly in accordance with all Federal, State, County and Municipal laws and ordinances, at the end of each work day and weekends.

SPECIAL CONTROLS

- A. Water Control:
 - 1. Keep excavations dry.
 - 2. Shape excavations, particularly piles of excavated material, so as to divert water from excavations and low spots.
- B. Erosion and Sedimentation Control:
 - 1. Prevent the pollution of land, air and water and control the erosion, washout and surface runoff of earth and stockpiled materials.
 - 2. Fill material shall contain no organic matter other than the normal organic component of topsoil.
 - 3. Immediately upon completion of final grading, stabilize graded areas with temporary or permanent vegetation, mulch, or paving.

MAINTENANCE OF TRAFFIC

- A. Control of vehicles and Persons:
 - 1. Provide trained personnel to assure the orderly flow of vehicular traffic during construction.
 - 2. Contractor shall submit a Maintenance of Traffic Plan (MOT) for review and acceptance by the Town when required.
 - 3. Upon completion of work each day the lanes shall be opened to traffic. Lane closure procedures shall be in accordance to the F.D.O.T. Standards.
 - 4. Ensure that private property driveways are usable upon completion of daily work.
- B. Limit of Operations:
 - 1. Any damage or alterations to areas outside the limit of operations shall be returned to original condition within 24 hours at no cost to the Town.

PROJECT IDENTIFICATION

- A. No signs, or advertisements will be allowed to be displayed on the premises without the approval of the Town's Representative.

PROJECT HOUSEKEEPING

- A. Trash Disposal
 - 1. Keep adjacent streets and site free from accumulations of waste materials and rubbish.
 - 2. Provide central waste area with containers for at least daily removal.
- B. Burning:
 - 1. Do not burn any trash or other material on site.
- C. Material Removal/Additional Soil:
 - 1. Excess material, including demolished material, roots from trees, excess earth and excess building materials are property of the contractor and shall be removed from site daily and legally disposed of.
 - 2. All material excavated or brought to the project for use/reuse shall be piled within the Public Right-of-Way in a location previously approved by the Town.
 - 3. The Contractor shall leave all locations in an acceptable manner once concrete has been poured. Contractor shall coordinate work to ensure that all sites are clean, sodded as required, and acceptable prior to mobilizing to other locations.
 - 4. The Contractor shall replace any sod, concrete and/or asphalt removed, damaged or displaced during demolition or performance of work at own expense.

QUALITY OF LIFE PRESERVATION

- A. Noise Control
 - 1. Contractor will use discretion whenever engaging in activities that might produce excessive noise and disturb residents in and around work areas.
 - 2. The Town shall have the right to impose reasonable limitations on the Contractor to prevent excessive noise and disturb residents in and around work areas.

B. Access to Property:

1. The Contractor shall at all times maintain meaningful access to a given property for residents of that property.

C. Staging of Work

1. All staging for work by the Contractor within the Town shall be first approved by the Town's department of public works.

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REPLACEMENT & INSTALLATION OF SIDEWALKS
POURED CONCRETE
SIDEWALKS & HANDICAP RAMPS & CURBS

DESCRIPTION

- A. Provide poured concrete at locations where no sidewalks or ramps exist to be per drawings and specifications
- B. Provide poured concrete in locations where existing sidewalk must be replaced per drawings and specifications, as directed.
- C. Provide curb cuts where proposed handicap ramps are installed and there is a conflict with existing curbs. Curb cuts shall allow for a three foot (3') transition up to either side of the handicap ramp. Any and all cuts shall commence and extend at least four feet (4') from both sides of the handicap ramp. All curbs shall be cut and transitioned in an acceptable manner. All surrounding pavement, sod, asphalt shall be restored to the existing elevation at the Contractor's expense.

QUALITY ASSURANCE

- A. Testing and Inspection of Installation
 - 1. Concrete shall not be poured, placed or installed until such time as an inspection of all sites has taken place by the Town authorized personnel. Inspections shall be made to verify appropriate compaction of sub-base and to check forms for line and grade.
 - 2. The Town will inspect the installation. If any concrete is found to be installed improperly, the Contractor will be required to remove and replace promptly. Upon notifications from the contractor, the Town will perform a re-inspection. Should additional concrete be found to be unsatisfactorily installed, and additional inspections required, these inspections shall be at the Contractor's cost, at the discretion of the Town.

PRODUCTS

- A. Concrete:
 - 1. Forms:
Steel, wood, or other suitable material of size and strength to resist movement during concrete placement. Conform to ACI 301.
 - 2. All Joints:
Joints must be scribed to help prevent cracking
 - 3. Concrete Mix Design:

Mix concrete in accordance with ASTM C94

Design mix to produce normal-weight concrete consisting of Portland cement, aggregate and water to produce the following properties:

- a. Compressive strength: 3000 psi, minimum at 28 days
- b. Slump range: 4" to 6"
- c. Air content: 5% to 8%

EXECUTION

- A. Inspect surfaces for conditions that will adversely affect the quality of installation.
Do not proceed with the installation until adverse conditions have been corrected.
- B. Compact sub-base surface immediately before placing concrete.
- C. Replace organic material with clean fill and installed up to 6" lifts and compact to a minimum of 95% compaction. Contractor shall submit type of clean fill for Town's approval prior to construction.
- D. The Town has the right to request compaction test at locations chosen by the Town.
- E. Concrete finishing:
 - a. Smooth surface by screeding and floating. Produce a uniform texture.
 - b. Work edges of slab to a 1/2" radius. Eliminate tool marks on concrete surface.
 - c. Broom finish after excess moisture has disappeared.

INSTALLATION

- A. General: Comply with requirements Florida Accessibility Code for Building Construction, latest edition, and Section 522 of the FDOT-SSR&BC, latest edition and other requirements as required.
- B. All sidewalks and ramps shall be four inches (4") thick except across driveways, driveway approaches, and first five feet (5') of ramps closest to paved roadways where that shall be six inches (6") thick.
- C. Sidewalk elevation shall be two inches (2") above the crown of the road, at the back side of the sidewalk, and the pitch shall be 1/4 inch per foot toward the road. Elevation may be adjusted, based on the existing grade, as approved by the Town.
- D. Contractor shall ensure that where handicap ramps are installed and there is a conflict with a curb that the curbing shall be cut back and transitioned for a distance of three feet (3') on either side of the ramps. The cut shall be

- provided at least one foot (1') behind the transition point. All modifications to the curb shall match existing curbs and shall be flush without exception.
- E. No wire or wire mesh shall be utilized within the public right of way. (R.O.W.).
 - F. Concrete shall not be poured, placed, or installed until such time as an inspection of all sites has taken place as per Section 3.1602 QUALITY ASSURANCE. **IF ANY WORK OR PORTION OF WORK HAS NOT BEEN INSPECTED AS PER SECTION 3.1602, THAT PORTION OF WORK SHALL BE IMMEDIATELY REMOVED AND REPLACED ONCE THE INSPECTION HAS BEEN CONFIRMED AT NO COST TO THE TOWN.**
 - G. Place concrete using methods which prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with internal vibrator. Keep vibrator away from joint assemblies, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocation of re-enforcing, dowel, and joint devices.
 - H. Deposit and spread concrete in a continuous operation between transverse joints, as far as possible.
 - I. Contractor shall replace all damaged or misaligned private walkways and driveways with a transition to the private property at 8 to 1 fill slope transition. All other locations shall have a 4 to 1 fill slope transition. Organic material can be used in areas outside walkways and driveways that require fill slopes. All costs associated with this task must be included in unit price.
 - J. Avoid premature cracking by installing expansions joint where required.
 - K. Utility boxes shall be raised to sidewalk elevations or flush with sidewalk as to prevent trip hazard.
 - L. Install root bio barrier prior to forming and pouring concrete.
 - M. Install root bio barrier at existing trees and new trees. Length of root bio barrier shall be ten feet (10') long centered on the tree by twelve inch (12") deep at one inch to two inch (1"-2") below the top of the sidewalk.
 - N. Concrete shall not be poured, installed or placed around manholes, cleanouts, or other structures until they are at required elevations and alignment. Contractor shall notify the Town in writing of manholes, cleanouts, or other items that may require relocation prior to pour.
 - O. All sidewalk that the Town has determined to be replaced due to deterioration, cracking, uplifting, improper sloping, misalignments, grade, etc. will be removed and replaced as required by specification.
 - P. Removal of existing sidewalk shall be performed by saw cutting the section of unacceptable sidewalk (as determined by the Town) at the nearest acceptable five foot (5') flag. New sidewalk shall be poured in its place as established by specifications.

- Q. All areas where existing sidewalk is to be replaced must be prepared and graded to match adjacent sidewalk flags.
- R. All replacement sidewalk sections shall be installed to match the existing sidewalk elevation.

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REPLACEMENT & INSTALLATION OF SIDEWALKS
PROTECTION STORM DRAINS

PROTECTION

- A. All storm drain inlets must be protected from sediments entering the storm water conveyance system prior to disturbance to the area.
- B. All sediment and erosion control practices must be in accordance with the Florida Department of Environmental Protection Storm Water Sediment and Erosion Control Manual Section 4.08 (Storm Drain Protection Procedures) (Best Management Practices BMPs).

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REPLACEMENT & INSTALLATION OF SIDEWALKS
TREE REMOVAL & PRESERVATION

REMOVALS

- A. **ONLY** the trees and/or shrubs that are deemed by the Town to interfere with the intent of the contract shall be removed or root pruned as needed. All cost associated with vegetation removal and/or root pruning shall be included with the unit price.
- B. The contractor shall be required to review the site prior to performance of work and ensure no conflicts exist. Any tree in conflict with the expected location of new sidewalk shall be reported to the Town for review.
- C. Remove trees and grind stumps and all surface roots to a minimum of 4" below grade.
- D. Restore the location where tree removals take place with soil and sod at grade.

PRESERVATION

The following actions and precautions shall be done to protect any trees that will remain in all of the construction areas during construction. These trees shall be those located near new sidewalk installation.

- A. Root Pruning
 - 1. All existing trees shall be root pruned along the sidewalk prior to sidewalk removal, excavation and installation.
 - 2. The root cutting shall be clean with no tears with root pruning machine.
 - 3. The cut shall extend from the tree out 4 feet minimum in both directions, or as the field may permit to ensure the protection of the tree.
 - 4. The cut shall be 12 inches below grade.
 - 5. The cut shall be no wider than 3 inches.
- B. Protective Root Bio Barriers
 - 1. Bio Barriers shall be placed no less than 6 feet around each tree or no less than 1 foot from edge of street, sidewalk or driveway.
 - 2. Bio Barriers shall be a minimum of 4 feet above ground level, constructed of wood, metal or rigid plastic, in the form of a fence. No barrier shall be secured in any way to the tree.
 - 3. Bio Barriers shall be installed prior to construction and remain until the Town authorizes their removal.
 - 4. No excess oil, fill, equipment, building materials or debris shall be placed within the barriers.
 - 5. The existing grade within the bio barrier shall not be changed.

REPLACEMENT & INSTALLATION OF SIDEWALKS
SOD & INSTALLATION

MATERIALS

- A. Sod shall be St. Augustine 'Floritam', grade A.
- B. Sod shall be weed and insect free.

INSTALLATION

Those areas disturbed as a consequence of sidewalk installation and those areas disturbed as a consequence of Contractor mobilization and stock piling shall be restored promptly at **Contractor's expense**.

The Contractor shall not utilize methods of mobilization or execution of work that impacts private/public areas excessively and/or in a manner that is unacceptable to the Town. Contractor shall ensure that all private and/or public areas impacted by the mobilization, stock piling, or lack of coordination as interpreted by the Town are restored at no cost to the Town.

- A. Only damaged areas of swales or private property shall be replaced. Where sidewalks require to be elevated above existing grade, swales shall be graded to a 12 to 1 fill slope with sod.
- B. Sodded areas shall have any compaction relieved, raked smooth and rocks or debris removed.
- D. Areas along the street and sidewalk shall be 2" inches below that surface so installed sod will be level with that surface.
- E. Sod will be laid tightly together, and cut to a uniform edge along hard surfaces and around trees or palms. The sod around trees or palms shall be laid encircling to within 18 inches, or up to the berm surrounding newly installed trees or palms.
- F. Sod shall be watered within one hour of installation and shall be maintained moist.

QUALITY ASSURANCE

- A. No sub-par sod or broken pieces will be accepted, and shall be removed from the site daily.
- B. No yellow sod will be accepted.
- C. Sod shall not be placed together with scraps that do not contain sufficient roots to sustain growth.
- D. Contractor is responsible for his own square foot take-offs to provide 100% sod coverage throughout the scope of the project.

- E. Rejected areas will be removed and replaced immediately, and all sod maintained until final acceptance.

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REPLACEMENT & INSTALLATION OF SIDEWALKS PAVEMENT

PAVEMENT

- A. Pavement repairs of driveway approaches and section of driveways affected by installation of sidewalks shall be re-installed with one inch (1”) of asphalt in accordance with the FDOT Manual of Uniform Minimum Standards for Design, Construction & Maintenance for Streets & Highways, latest edition.
- B. Concrete repairs shall be limited to damage which results as part of construction and elevation changes of the new sidewalk.

EXECUTION

- A. Contractor shall repair asphalt/concrete driveway approaches where existing approaches are damaged by construction process. Contractor shall photograph all existing approaches and sidewalks prior to starting construction or risk repairing at his cost.

QUALITY ASSURANCE

- A. Testing and Inspection of Installation
 - 1. The Town will inspect the installation. If any asphalt or concrete is found to not be installed adequately, the Contractor will be required to remove and replace promptly. Upon notifications from the contractor, the Town will perform a re-inspection. Should additional asphalt be found to be unsatisfactorily installed, and additional inspections are required, these inspections shall be at Contactor’s cost, at the discretion of the Town.

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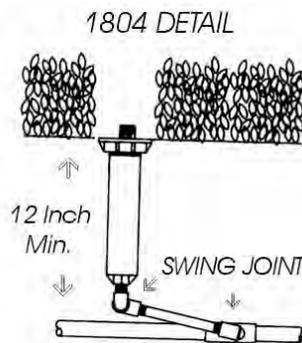
REPLACEMENT & INSTALLATION OF SIDEWALKS IRRIGATION

CONDITIONS

- A. Contractor is responsible for identifying any irrigation piping that residents may have either in the swale or along the existing sidewalk. Any irrigation piping, sprinklers or wiring must be replaced to the residents' satisfaction.
- B. Contractor shall identify and document all locations and notify the Town's authorize personnel of any existing irrigation systems. Documents will be used by the Town's authorize personnel for inspection to verify satisfactory repairs or replacements.

INSTALLATION

- A. Any piping that is removed shall be replaced with equal size PVC; PR160 or PR200. Schedule 40 PVC fittings shall be used.
- B. Sprinklers shall be Rainbird 1804, mounted with swing joints, with the appropriate pattern of nozzle (see detail 1804)



APPENDIX "B"
PROJECT SURVEY

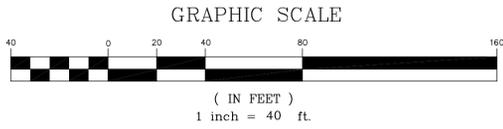
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TOPOGRAPHIC SURVEY

TOWN OF CUTLER BAY SW 100 AVE

Location Sketch

SEC 5 TWP 56S RGE 40E
Not To Scale



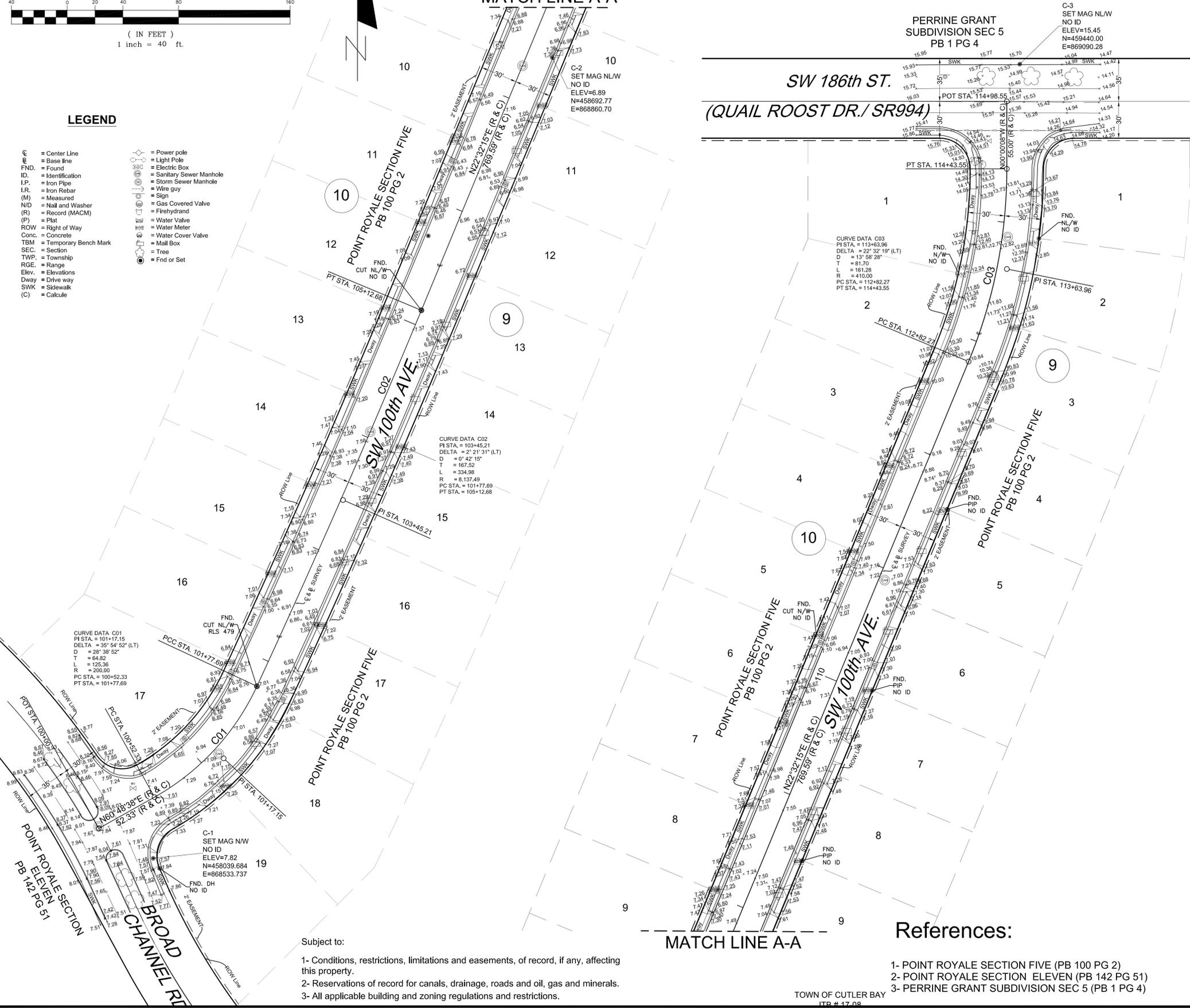
LEGEND

- C = Center Line
- B = Base line
- FND. = Found
- ID. = Identification
- I.P. = Iron Pipe
- (M) = Measured
- N/D = Nail and Washer
- (R) = Record (MACM)
- (P) = Plat
- ROW = Right of Way
- Conc. = Concrete
- TBM = Temporary Bench Mark
- SEC. = Section
- TWP. = Township
- RGE. = Range
- Elev. = Elevations
- Dway = Drive way
- SWK = Sidewalk
- (C) = Calculate
- Power pole
- Light Pole
- Electric Box
- Sanitary Sewer Manhole
- Storm Sewer Manhole
- Wire guy
- Sign
- Gas Covered Valve
- Firehydrant
- Water Valve
- Water Meter
- Water Cover Valve
- Mail Box
- Tree
- Fnd or Set

MATCH LINE A-A

PERRINE GRANT
SUBDIVISION SEC 5
PB 1 PG 4

SW 186th ST.
(QUAIL ROOST DR./ SR994)



General Notes:

1. Bearings and Coordinates are relative to the State Plane Coordinates, Florida East zone, North American Datum (NAD) of 1983/1993 adjustment, with a bearing of North 21°40'29" East being established between monuments C3, (Set. MAG NL/W) No ID & C1, (Set. MAG NL/W) No ID. Coordinates on the Primary Control Points were derived from Global Positioning System (GPS) measurements using Miami-Dade Water and Sewer Department GPS/GIS control. Points used are the following:

- BC-32: N 453814.453
E 860500.001
- U-705: N 460611.110
E 876242.847

2. Vertical information is relative to the North Geodetic Vertical Datum of 1929 (NGVD 29), originated from Dade County Bench Marks listed below: Vertical Control is relative to the National Geodetic Vertical Datum of 1929 (NGVD29)
 - a) Locator #: 6040W, Name: U-700, Elevation: 13.18' NGVD 1929
 - b) Locator #: 6040S, Name: FCE 2570, Elevation: 6.92' NGVD 1929
3. Project units: U.S. Survey feet.
4. Field book references: MEI #061
5. Other than may be noted in reference, no other public records search was made for the purposes of this Survey.
6. There may be additional restriction not shown on this survey that may be found in Miami Dade County Public Records.
7. Right of way lines are established from information listed in the references. Other information may exist that would be found in title investigation.
8. Leveling error was distribute throught out the level run by the length of line method adjustment.
9. The leveling misclosure meets the accuracy standard of 0.05 FT times the square root of the level run distance in miles (Chapter 5J-17-050) Minimum Technical Standard of the Florida Administrative Code (FAC).
10. The accuracy of Control Survey was verified by conventional traverse and its closures (1/10,000) and meets the best accuracy standard for Commercial/High Risk: 1 foot, in 10,000 feet.
11. Underground utilities or other improvement were not located.
12. Additions or deletions to Survey Maps by others than the signing party is prohibited without written consent of the signing party.
13. Well-identified features on this survey and map have been measured to an estimated horizontal positional accuracy of 0.3 ft.
14. The Control Survey meets the requirements of the Florida Minimum Technical Standards as contained in Chapter 5J-17-050 (FGCS Third Order, Class II) a length measurement of 1 part in 10,000 was acquired.
15. Last day of data acquisition: 06-11-15.
- 16-This Map is intended to be displayed at a Scale of 1/40 or smaller
- 17- Sufficient Data were obtained to insure 95% confidence level to calculate Survey Accuracy.

References:

- 1- POINT ROYALE SECTION FIVE (PB 100 PG 2)
- 2- POINT ROYALE SECTION ELEVEN (PB 142 PG 51)
- 3- PERRINE GRANT SUBDIVISION SEC 5 (PB 1 PG 4)

- Subject to:
- 1- Conditions, restrictions, limitations and easements, of record, if any, affecting this property.
 - 2- Reservations of record for canals, drainage, roads and oil, gas and minerals.
 - 3- All applicable building and zoning regulations and restrictions.

Certification:
I hereby certify that this Specific Purpose Survey was made under my responsible charge and to the best of my knowledge and belief is true, correct and meets the Minimum Technical Standards as set forth by the board of professional land surveyors in Chapter 5J-17 Florida Administrative code pursuant to Section 472.027, Florida Statutes. Survey map or the copies thereof are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.

Lazaro Fleitas, P.S.M.
Professional Surveyor and Mapper
License No. 6518
State of Florida

Revisions	Description
No.	Date

Revisions	Description
No.	Date

Project Title:
TWON OF CUTLER BAY
SW 100 AVENUE
MIAMI-DADE COUNTY, FLORIDA

Drawing Title:
TOPOGRAPHIC SURVEY

MARLIN ENGINEERING, INC.
2191 NW 97 Ave, Miami, Florida 33172
(305) 477-7575 C.A. No. 6104, LB#7241

Project Manager: M. SORIA.
Survey: L.F.
Draw: E.A.
Checked: S.A.

Project No.	
Date July 01 2015	Scale AS SHOWN
Drawing No.	44

APPENDIX "C"
PROJECT PLANS

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COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS

CONTRACT PLANS

PROJECT ITB NO. 12-34

**SW 100TH AVENUE IMPROVEMENTS
FROM BROAD CHANNEL DR TO SW 186TH ST/QUAIL ROOST DR
TOWN OF CUTLER BAY
MIAMI-DADE COUNTY**

A DETAILED INDEX APPEARS ON THE
KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SUMMARY OF QUANTITIES
3	TYPICAL SECTION
4	PROJECT NOTES
5 - 9	ROADWAY PLAN
10 - 21	ROADWAY PROFILE
22 - 28	DRAINAGE STRUCTURES
29 - 38	CROSS SECTIONS
39 - 40	TRAFFIC CONTROL PLAN
41 - 43	DRAINAGE DETAILS
44 (Survey I)	TOPOGRAPHIC SURVEY CONTROL

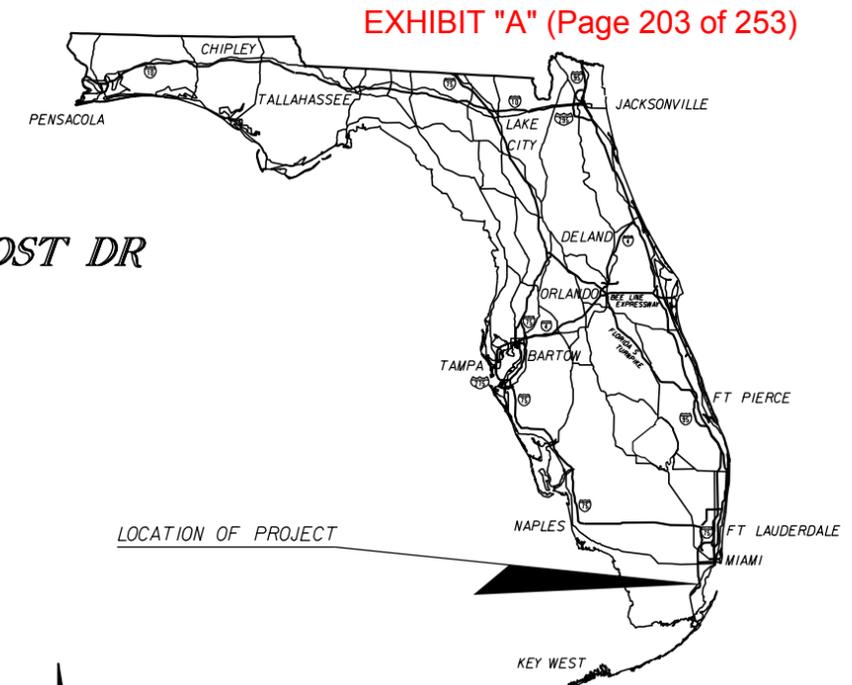


EXHIBIT "A" (Page 203 of 253)



ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

RAFAEL A. LAGOS, P.E.
P.E. LICENSE NUMBER 51412
MARLIN ENGINEERING, INC.
1700 NW 66TH AVE. SUITE 106
PLANTATION, FL 33313

PLANS PREPARED BY:

MARLIN
ENGINEERING

RAFAEL LAGOS, P.E. • P.E. No.: 51412
1700 NW 66 Ave., Ste. 106 • Plantation, FL 33313
(305) 477-7575 • C.A. No. 6104

VENDOR NO. 65-0279601
C.A. NO. 6104

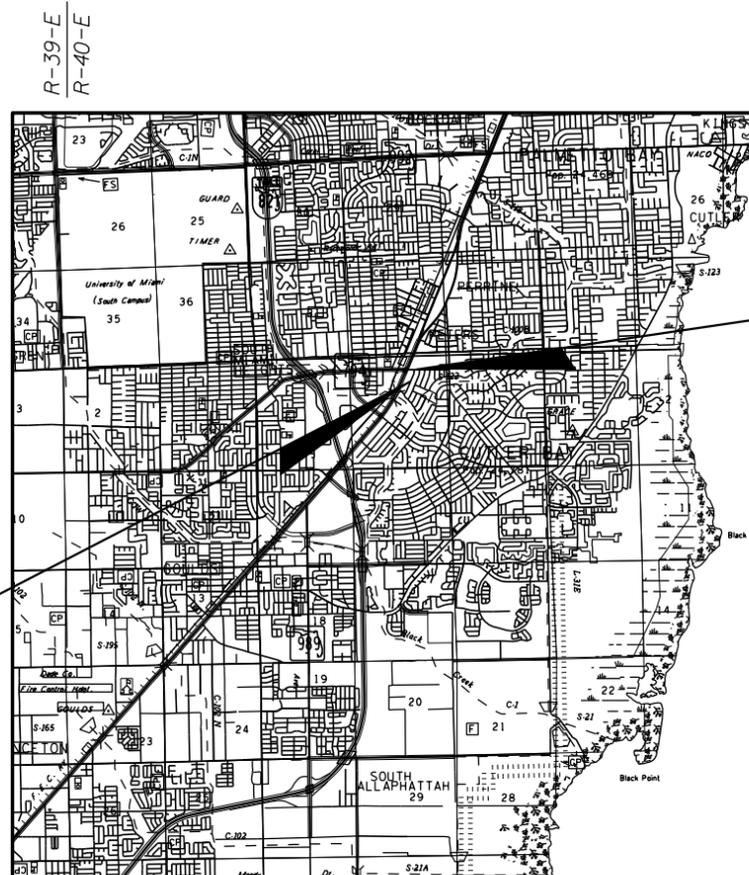
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

THIS DOCUMENT HAS BEEN DIGITALLY
SIGNED AND SEALED BY:

MARLIN ENGINEERING, INC
1700 NW 66 AVE, SUITE 106
PLANTATION, FLORIDA 33313
CERTIFICATE OF AUTHORIZATION 6104
RAFAEL LAGOS, P.E. NO. 51412

ROADWAY PLANS
ENGINEER OF RECORD: RAFAEL A. LAGOS, P.E.

P.E. NO. 51412



END PROJECT
STA. 114+80.00
@ SURVEY SW 100 AVE.

BEGIN PROJECT
STA. 99+64.99
@ SURVEY SW 100 AVE.

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

TOWN OF CUTLER BAY
ITB # 17-08
SW 100 AVENUE STORMWATER RETROFIT PROJECT
Page 203 of 253

SHEET
NO.

1

SUMMARY OF PAY ITEMS

PAY ITEM NO.	DESCRIPTION	UNIT	TOTAL	
			PLAN	FINAL
101-1	MOBILIZATION	LS/LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS/DA	1 / 135	
*	WORK ZONE SIGN	EA	28	
*	CHANNELIZING DEVICE - TYPES I, II, DI, VP, DRUM, OR LCD	EA	163	
*	CHANNELIZING DEVICE - TYPE III, 6'	EA	2	
*	CHANNELIZING DEVICE - PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	EA	8	
*	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	EA	2	
104-10-3	SEDIMENT BARRIER	LF	3000	
104-18	INLET PROTECTION SYSTEM	EA	16	
107-1	LITTER REMOVAL AND DISPOSAL	AC	0.55	
107-2	MOWING	AC	0.20	
110-1-1	CLEARING AND GRUBBING	LS/AC	1 / 0.23	
120-1	REGULAR EXCAVATION	CY	467.7	
120-6	EMBANKMENT	CY	65.2	
160-4	TYPE B STABILIZATION	SY	1668	
162-1-11	PREPARED SOIL LAYER, FINISH SOIL LAYER, 6"	SY	109	
285-706	OPTIONAL BASE, BASE GROUP 06	SY	1603	
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	6227	
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	TN	395.6	
337-7-73	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-9.5, PG 76-22, ARB	TN	386.3	
425-1-203	INLETS, CURB, TYPE 9, J BOT, <10'	EA	6	
425-1-441	INLETS, CURB, TYPE J-4, <10'	EA	6	
425-2-71	MANHOLES, J-7, <10'	EA	4	
430-174-118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" SD	LF	985	
430-174-124	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" SD	LF	89	
443-70-3	FRENCH DRAIN, 18"	LF	1115	
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF	3189	
520-2-4	CONCRETE CURB, TYPE D	LF	58	
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	1893	
527-2	DETECTABLE WARNINGS	SF	40	
570-1-2	PERFORMANCE TURF, SOD	SY	980	

PAY ITEM NOTES

*: TO BE PAID UNDER THE LUMP SUM PAY ITEM 102-1: MAINTENANCE OF TRAFFIC

REVISIONS		
DATE	DESCRIPTION	DATE

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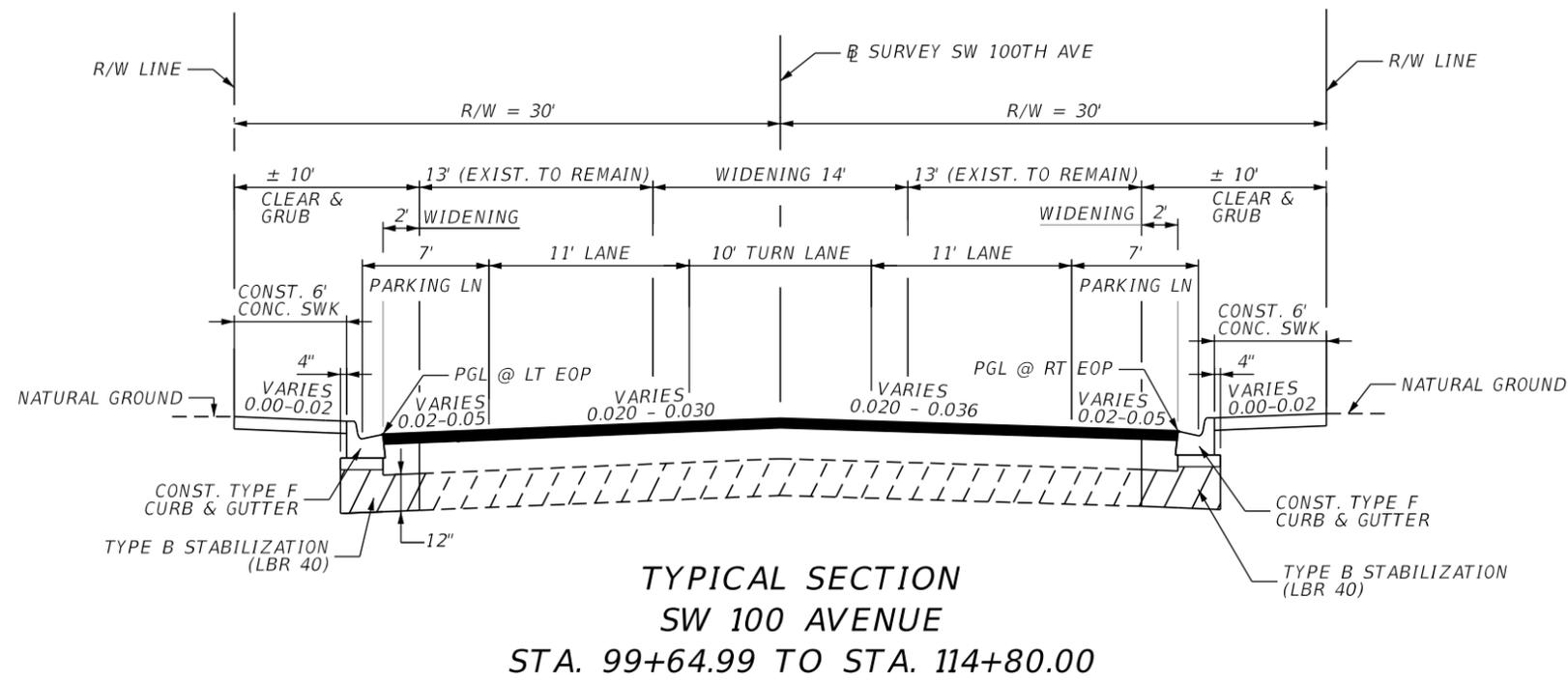


TOWN OF CUTLER BAY
IRB # 2-09
SW 100th Avenue Stormwater Retrofit Project

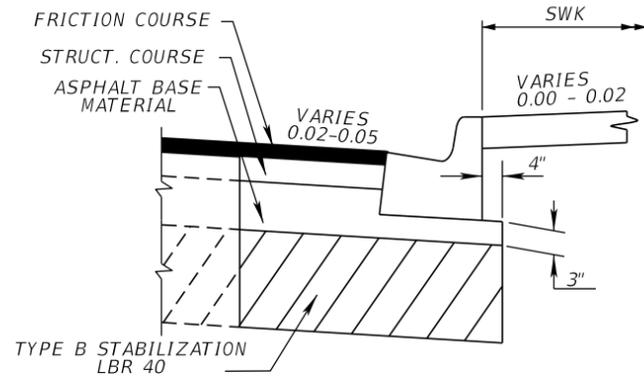
TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

SUMMARY OF QUANTITIES

SHEET NO.
2



**TYPICAL SECTION
SW 100 AVENUE
STA. 99+64.99 TO STA. 114+80.00**



DETAIL OF ASPHALT BASE CURB PAD

WIDENING

OPTIONAL BASE GROUP 6 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1")
AND FRICTION COURSE FC-9.5 (1")

MILLING

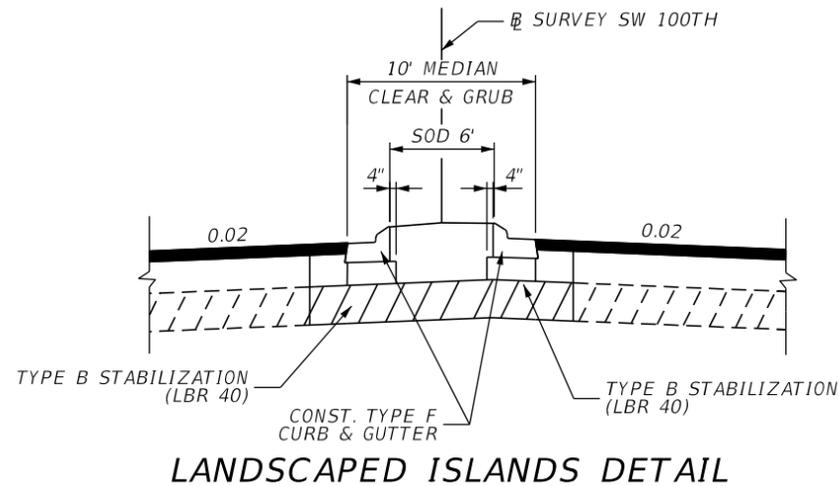
MILL EXISTING ASPHALT
PAVEMENT FOR DEPTH (1")

RESURFACING

TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1"),
AND FRICTION COURSE FC-9.5 (1") (RUBBER)

OVERBUILD FOR SLOPE

TYPE SP OVERBUILD (TRAFFIC C)
THICKNESS VARIES (3/8" TO 1 1/2".)



LANDSCAPED ISLANDS DETAIL

REVISIONS		
DATE	DESCRIPTION	DATE

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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100 AVENUE STORMWATER RETROFIT PROJECT

TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

TYPICAL SECTION

SHEET NO.
3

GENERAL NOTES

1. B.M. DATA IS NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD-29).
2. ALL PUBLIC LAND CORNERS AND PRIMARY NETWORK CONTROL SURVEY MONUMENTS ARE TO BE PROTECTED BY THE CONTRACTOR. CORNERS AND MONUMENTS WITHIN THE WORK ZONE AND IN DANGER OF BEING DAMAGED, DESTROYED OR COVERED SHALL BE PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS OF THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYOR PRIOR TO THE BEGINNING OF WORK. UPON PROJECT COMPLETION THE CONTRACTOR SHALL RESTORE ALL SUCH CORNERS AND MONUMENTS AND SHALL FURNISH TO THE DISTRICT LOCATION SURVEYOR A SIGNED AND SEALED COPY OF THE LAND SURVEYOR'S REFERENCE DRAWING. INCLUDE ALL COST OF REFERENCING, RESTORING AND PRESERVING CORNERS AND MONUMENTS IN THE BID PRICE FOR PAY ITEM 101-1 MOBILIZATION.
3. ALL DISPOSAL OF MATERIALS, RUBBISH, DEBRIS AND EXCESS MATERIAL AS DESIGNATED BY THE ENGINEER SHALL BE MADE AT A LEGAL DISPOSAL SITE OR BY OTHER PRIOR APPROVED MANNER WITHIN 72 HRS OF BEING DEPOSITED AT THE CONTRACTOR'S EXPENSE. MATERIAL CLEARED FROM THE SITE AND DEPOSITED ON ADJACENT AND/OR NEARBY PROPERTY WILL NOT BE CONSIDERED AS HAVING BEEN DISPOSED OF SATISFACTORY.
4. THE CONTRACTOR SHALL USE A STREET SWEEPER (USING WATER) OR OTHER EQUIPMENT CAPABLE OF CONTROLLING AND REMOVING DUST. APPROVAL OF THE USE OF SUCH EQUIPMENT IS CONTINGENT UPON ITS DEMONSTRATED ABILITY TO DO THE WORK. CLEANING AND SWEEPING IS TO BE INCLUDED IN ITEM 102-1 MAINTENANCE OF TRAFFIC.
5. THE CONTRACTOR SHALL MAINTAIN THE STATION MARKS VISIBLE UNTIL FINAL INSPECTION. COST TO BE INCLUDED IN RELATED PAY ITEM 102-1 MAINTENANCE OF TRAFFIC.
6. ASPHALT DRIVEWAYS ON PRIVATE PROPERTY ABUTTING THE RIGHT OF WAY WHICH ARE DAMAGED BY CONSTRUCTION SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT NO COST TO THE TOWN OF CUTLER BAY.
7. ALL STATIONS AND OFFSETS REFER TO @ SURVEY SW 100 AVENUE UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES IN THE AREA OF WORK 48 HOURS BEFORE BEGINNING CONSTRUCTION.
9. EXACT LOCATION OF TURNOUTS TO PRIVATE PROPERTY SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.
10. EXISTING LAND MARKERS AND MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REFERENCED AND RESET BY THE CONTRACTOR IF REQUIRED.
11. THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE VERIFIED/ DETERMINED BY THE UTILITY OWNER PRIOR TO OR DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS.
12. AT THE AREAS WHERE NEW ASPHALT PAVEMENT IS MATCHING EXISTING PAVEMENT, THE CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT AND PROVIDE A SMOOTH TRANSITION, INCLUDING ALL DRIVEWAYS.
13. ALL WORK SHALL FOLLOW ALL APPLICABLE SAFETY REQUIREMENTS (E.G., OSHA, ETC.).

DRAINAGE NOTES:

1. EXISTING STORM SEWERS (PIPES, FRENCH DRAINS AND/OR SLAB COVERED TRENCHES) MAY REMAIN IN PLACE IF NOT IN CONFLICT WITH PROPOSED CONSTRUCTION. PLUG OPEN ENDS WHERE NEEDED WITH MISCELLANEOUS CONCRETE. COST TO BE INCLUDED IN PAY ITEM 110-1 CLEARING & GRUBBING, UNLESS OTHERWISE STATED ON PLANS.
2. EXISTING STORM SEWERS (PIPES, FRENCH DRAINS AND/OR SLAB COVERED TRENCHES) IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE REMOVED. COST OF REMOVAL, DISPOSAL, BACKFILLING AND COMPACTING SHALL BE INCLUDED IN ITEM 110-1-1 CLEARING AND GRUBBING AS PER 110-6 OF STANDARD SPECIFICATIONS.
3. THERE SHALL BE NO MORE THAN THREE LATERAL DRAINAGE INSTALLATIONS WITHOUT BACKFILLING. BACKFILLING OF LATERAL DRAINAGE SHALL NOT LAG MORE THAN 72 HOURS BEHIND THE START OF EXCAVATION.
4. ELEVATIONS AND OFFSETS FOR CURB INLETS ARE GIVEN AT THE EDGE OF PAVEMENT.

UTILITIES NOTES:

1. FOR UTILITY ADJUSTMENT SYMBOLS, SEE FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM, 2010., INDEX NO. 002.
2. ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.
3. TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, TELEPHONE NUMBER 1-800-432-4770, AND THE UTILITY OWNER AND REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES.
4. THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES. THE ADDITIONAL COST OF EXCAVATING, INSTALLING, BACKFILLING AND COMPACTING AROUND THESE LATERAL SERVICES MUST BE INCLUDED IN THE BID RELATED ITEM FOR THE WORK BEING DONE.
5. PRE-TRENCHING IN THE ALIGNMENT AND GRADE OF PROPOSED PIPES STRUCTURES, FRENCH DRAINS, SLAB COVERED TRENCHES, CONDUITS, AND/OR SUB-GRADE SHALL BE PERFORMED SEVEN DAYS IN ADVANCE OF ITS CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE UNDERGROUND UTILITY OWNERS AND THE DEPARTMENT WITH A SEVEN DAYS ADVANCE NOTICE OF ANY CONFLICT WITH PROPOSED CONSTRUCTION. THIS NOTIFICATION SHALL PROVIDE SURVEY INFORMATION ABOUT EXISTING UTILITY ALIGNMENT, GRADE AND POSSIBLE CONFLICTS. PAYMENT FOR PRE-TRENCHING, SURVEY AND BACKFILLING SHALL BE INCLUDED IN THE COST OF THE RELATED BID ITEM FOR THE WORK BEING DONE.
6. UTILITY OWNER:

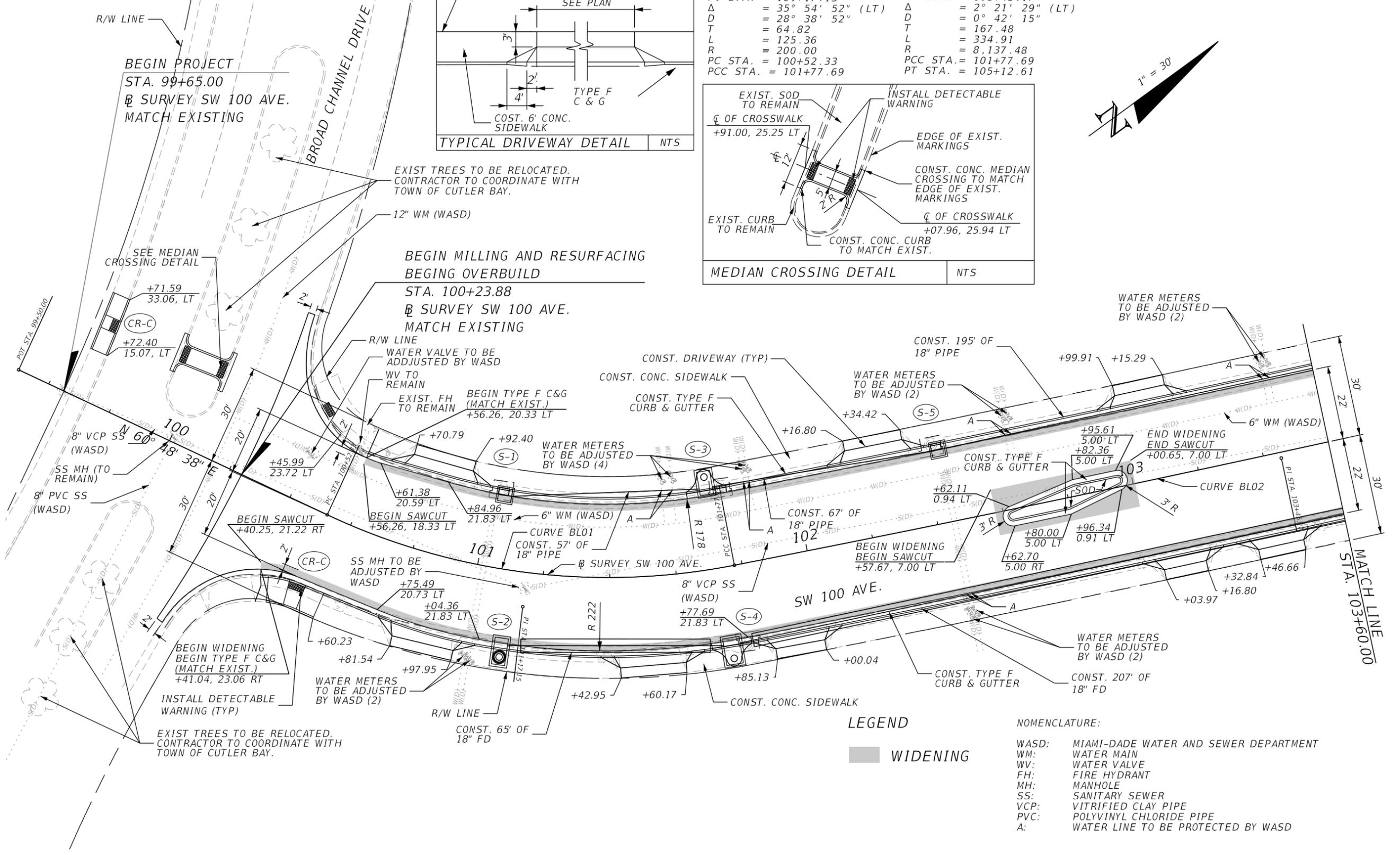
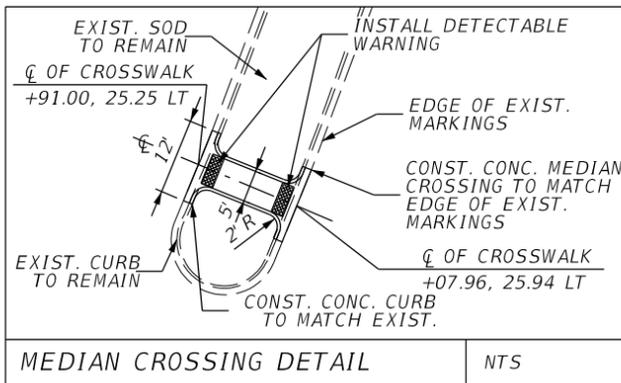
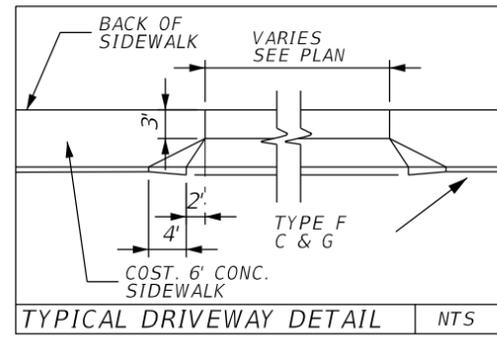
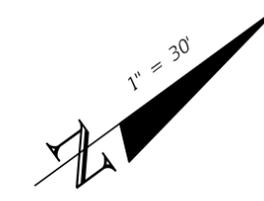
FLORIDA POWER & LIGHT (DISTRIBUTION)
 AT&T-FLORIDA
 COMCAST
 FLORIDA CITY GAS
 MIAMI-DADE WATER & SEWER DEPARTMENT
 MIAMI-DADE PUBIC WORKS TRAFFIC & SIGNALS

ANGEL VARGAS 305-442-5129
 RICHARD RENFROW 305-260-8243
 LEONARD MAXWELL-NEWBOLD 954-534-7484
 DEXTER PINKNEY 305-835-3632
 PHILLIP TORRES 786-268-5214
 AURELIO DEL VALLE 305- 592-8925 EXT. 258



REVISIONS			 RAFAEL LAGOS, P.E. • P.E. No.: 51412 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33317 (305) 477-7575 • C.A. No. 6104	 TOWN OF CUTLER BAY SW 100TH AVENUE FROM BROAD CHANNEL DR TO SW 100TH ST @ HAIL ROOST DR MIAMI-DADE, FLORIDA	PROJECT NOTES	SHEET NO.
DATE	DESCRIPTION	DATE				4

CURVE DATA BL01	CURVE DATA BL02
PI STA. = 101+17.15	PI STA. = 103+45.17
Δ = 35° 54' 52" (LT)	Δ = 2° 21' 29" (LT)
D = 28° 38' 52"	D = 0° 42' 15"
T = 64.82	T = 167.48
L = 125.36	L = 334.91
R = 200.00	R = 8,137.48
PC STA. = 100+52.33	PCC STA. = 101+77.69
PCC STA. = 101+77.69	PT STA. = 105+12.61



REVISIONS		
DATE	DESCRIPTION	DATE

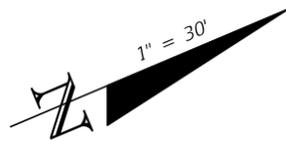
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 Page 207 of 253

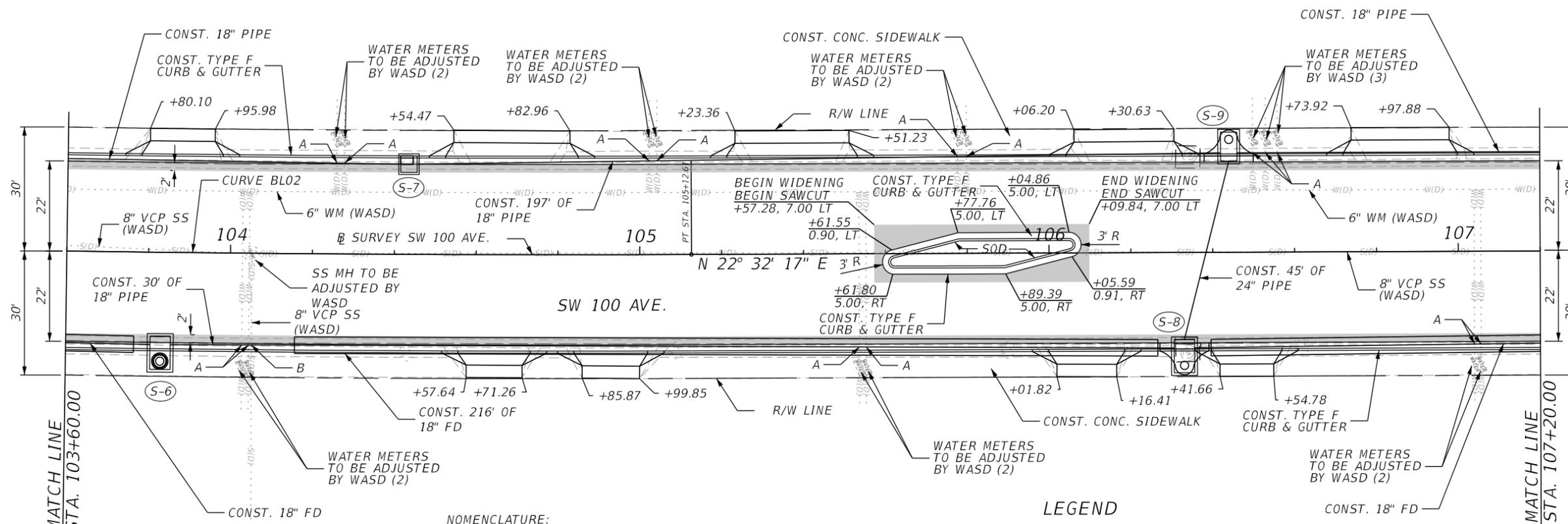
TOWN OF CUTLER BAY
SW 100th Avenue
 FROM BROAD CHANNEL DR TO SW 10th St / NAIL ROOST DR
 MIAMI-DADE, FLORIDA

ROADWAY PLAN

SHEET NO.	5
-----------	---



CURVE DATA BL02
 PI STA. = 103+45.17
 Δ = 2° 21' 29" (LT)
 D = 0° 42' 15"
 T = 167.48
 L = 334.91
 R = 8,137.48
 PCC STA. = 101+77.69
 PT STA. = 105+12.61



NOMENCLATURE:

- WASD: MIAMI-DADE WATER AND SEWER DEPARTMENT
- WM: WATER MAIN
- WV: WATER VALVE
- FH: FIRE HYDRANT
- MH: MANHOLE
- SS: SANITARY SEWER
- VCP: VITRIFIED CLAY PIPE
- A: WATER LINE TO BE PROTECTED BY WASD
- B: SANITARY SEWER TO BE PROTECTED BY WASD

LEGEND

■ WIDENING

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

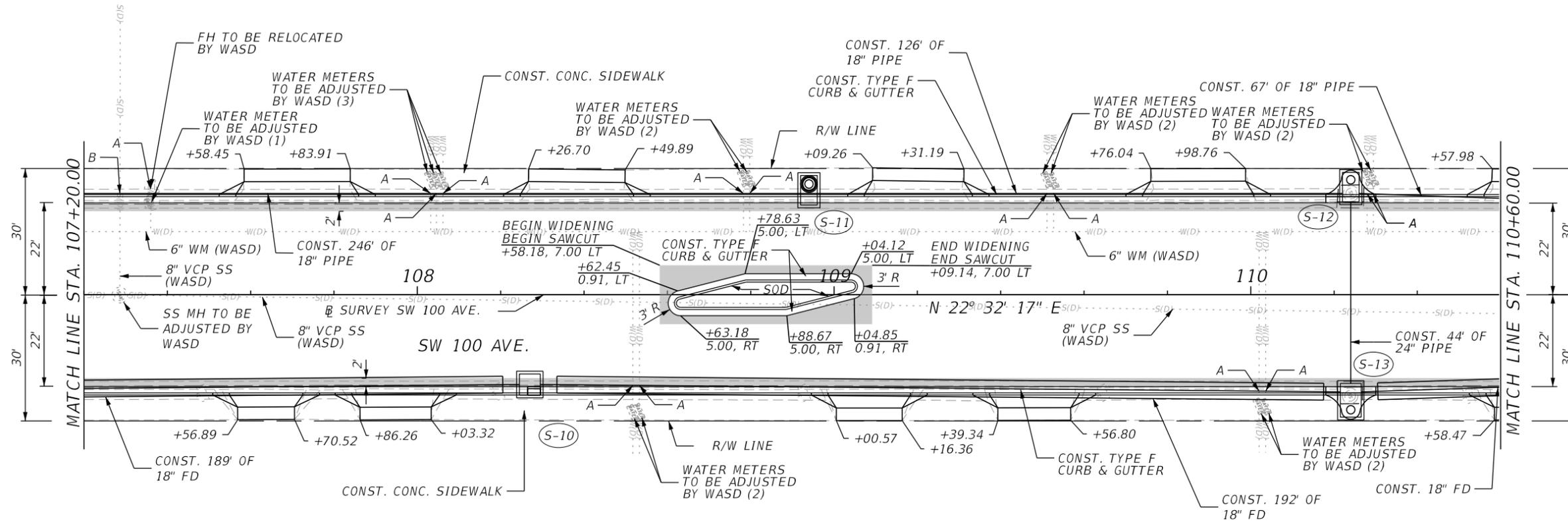
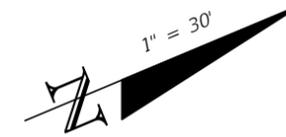
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 (305) 477-7575 • C.A. No. 6104



TOWN OF CUTLER BAY
 SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST @ NAIL ROOST DR
 MIAMI-DADE, FLORIDA

ROADWAY PLAN

SHEET NO.
6



LEGEND

■ WIDENING

NOMENCLATURE:

- WASD: MIAMI-DADE WATER AND SEWER DEPARTMENT
- WM: WATER MAIN
- WV: WATER VALVE
- FH: FIRE HYDRANT
- MH: MANHOLE
- SS: SANITARY SEWER
- VCP: VITRIFIED CLAY PIPE
- A: WATER LINE TO BE PROTECTED BY WASD
- B: SANITARY SEWER TO BE PROTECTED BY WASD

REVISIONS		
DATE	DESCRIPTION	DATE

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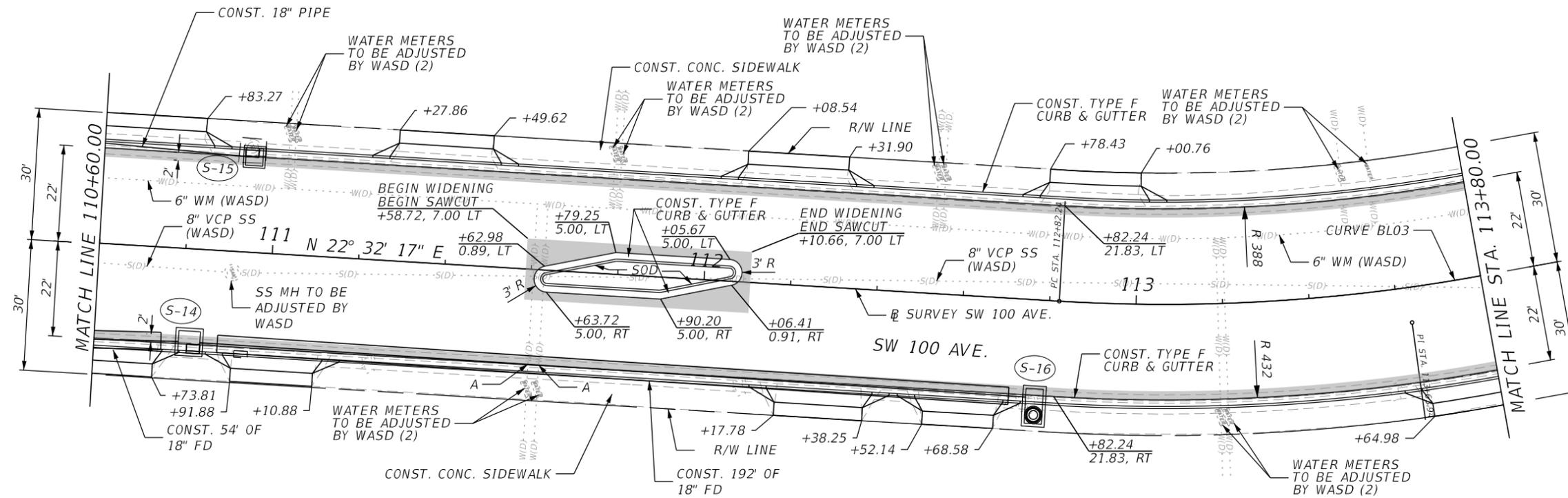


TOWN OF CUTLER BAY
SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST @ NAIL ROOST DR
 MIAMI-DADE, FLORIDA

ROADWAY PLAN

SHEET NO.
7

CURVE DATA BLO3
 PI STA. = 113+63.94
 Δ = 22° 32' 25" (LT)
 D = 13° 58' 28"
 T = 81.70
 L = 161.29
 R = 410.00
 PC STA. = 112+82.24
 PT STA. = 114+43.53



NOMENCLATURE:

WASD: MIAMI-DADE WATER AND SEWER DEPARTMENT
 WM: WATER MAIN
 WV: WATER VALVE
 FH: FIRE HYDRANT
 MH: MANHOLE
 SS: SANITARY SEWER
 VCP: VITRIFIED CLAY PIPE
 A: WATER LINE TO BE PROTECTED BY WASD

LEGEND

■ WIDENING

REVISIONS		
DATE	DESCRIPTION	DATE

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 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33317
 (305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

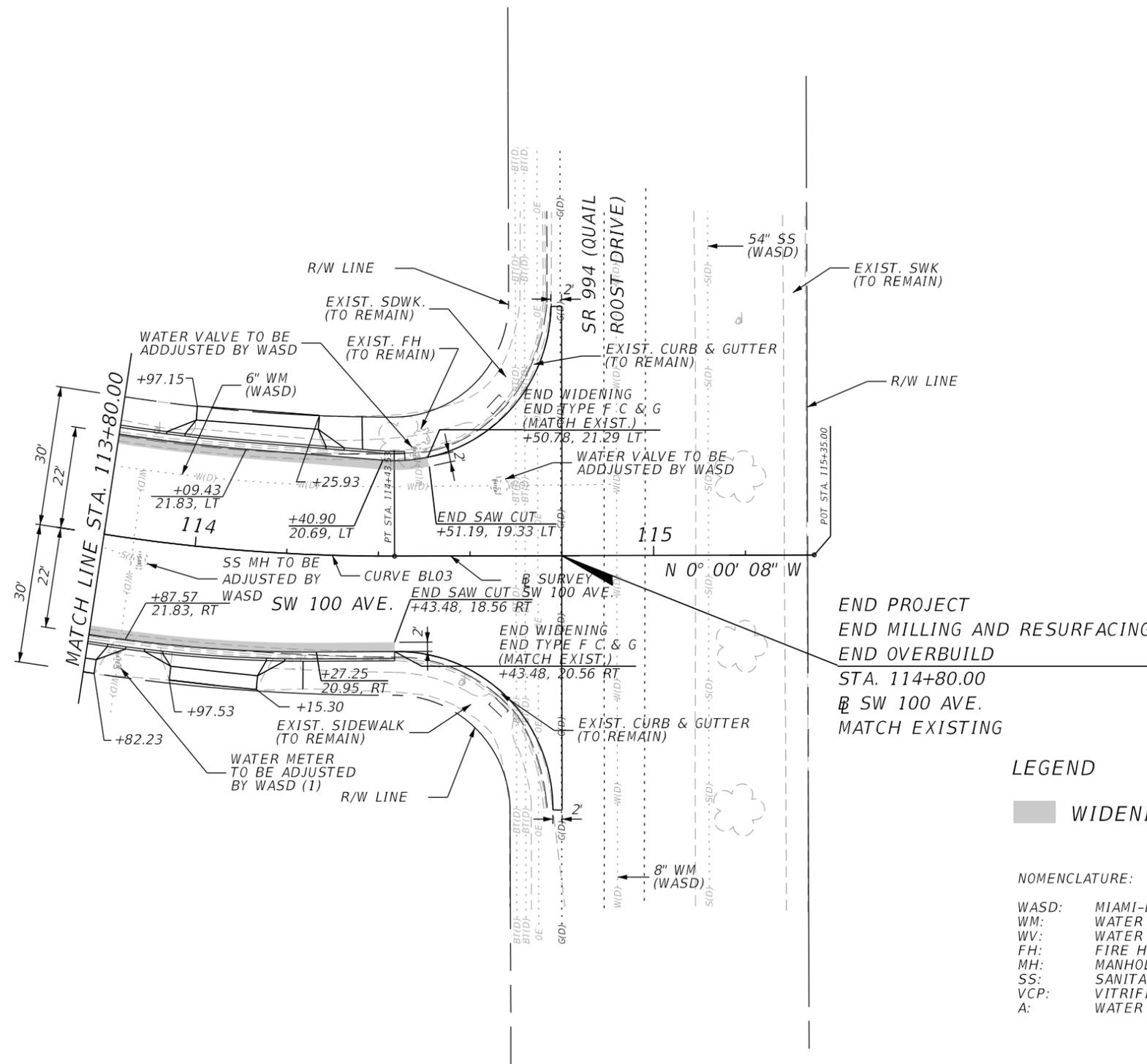
TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

ROADWAY PLAN

SHEET NO.
8



CURVE DATA BLO3
 PI STA. = 113+63.94
 Δ = 22° 32' 25" (LT)
 D = 13° 58' 28"
 T = 81.70
 L = 161.29
 R = 410.00
 PC STA. = 112+82.24
 PT STA. = 114+43.53



END PROJECT
 END MILLING AND RESURFACING
 END OVERBUILD
 STA. 114+80.00
 @ SW 100 AVE.
 MATCH EXISTING

LEGEND

■ WIDENING

NOMENCLATURE:

- WASD: MIAMI-DADE WATER AND SEWER DEPARTMENT
- WM: WATER MAIN
- WV: WATER VALVE
- FH: FIRE HYDRANT
- MH: MANHOLE
- SS: SANITARY SEWER
- VCP: VITRIFIED CLAY PIPE
- A: WATER LINE TO BE PROTECTED BY WASD

REVISIONS		
DATE	DESCRIPTION	DATE

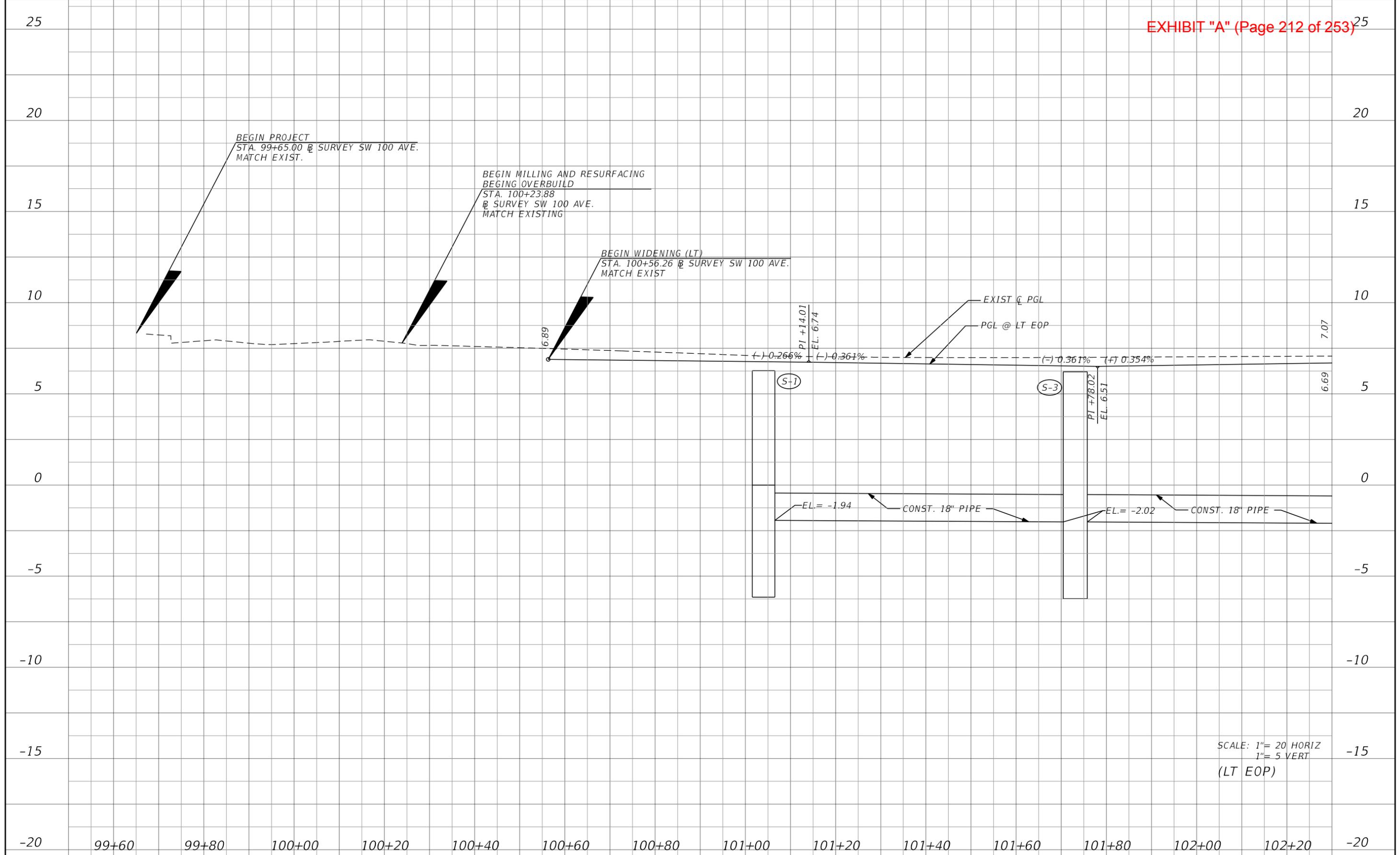
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TOWN OF CUTLER BAY
SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST @ QUAIL ROOST DR
 MIAMI-DADE, FLORIDA

ROADWAY PLAN

SHEET NO.
 9



SCALE: 1"= 20' HORIZ
1"= 5' VERT
(LT EOP)

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
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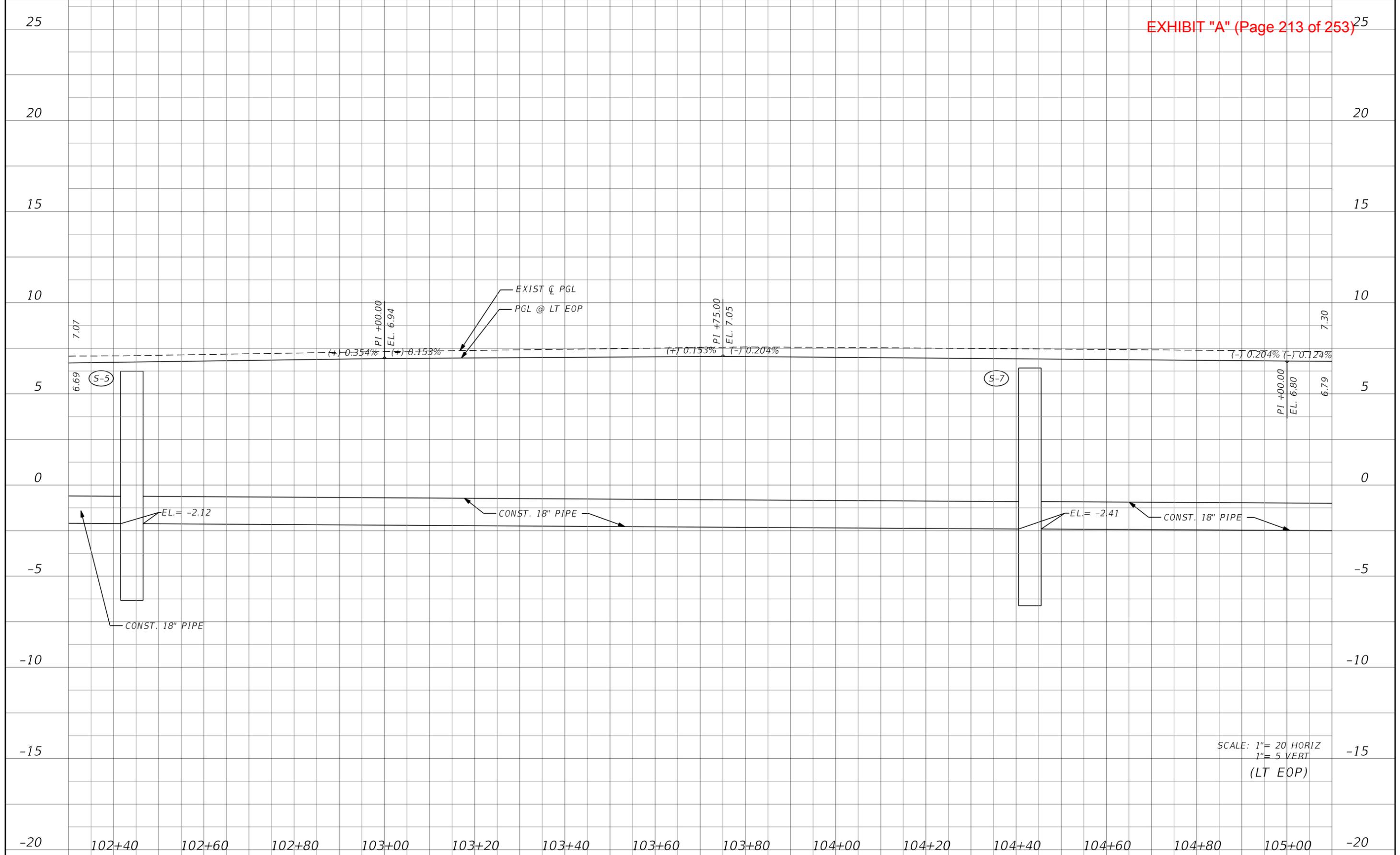
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TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St @ Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
10



SCALE: 1" = 20' HORIZ
1" = 5' VERT
(LT EOP)

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

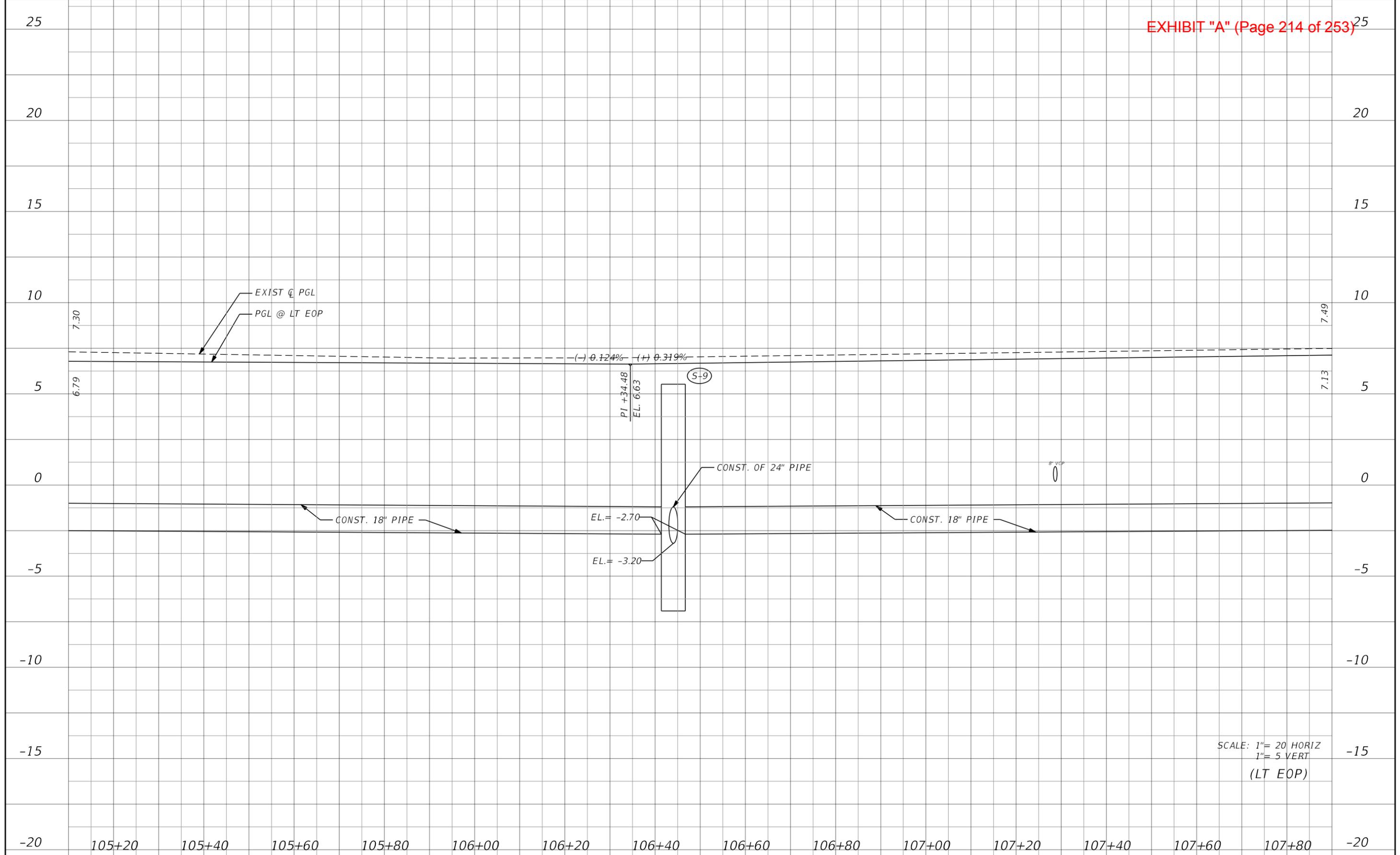
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100TH AVENUE STORMWATER RETROFIT PROJECT

TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
11



REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

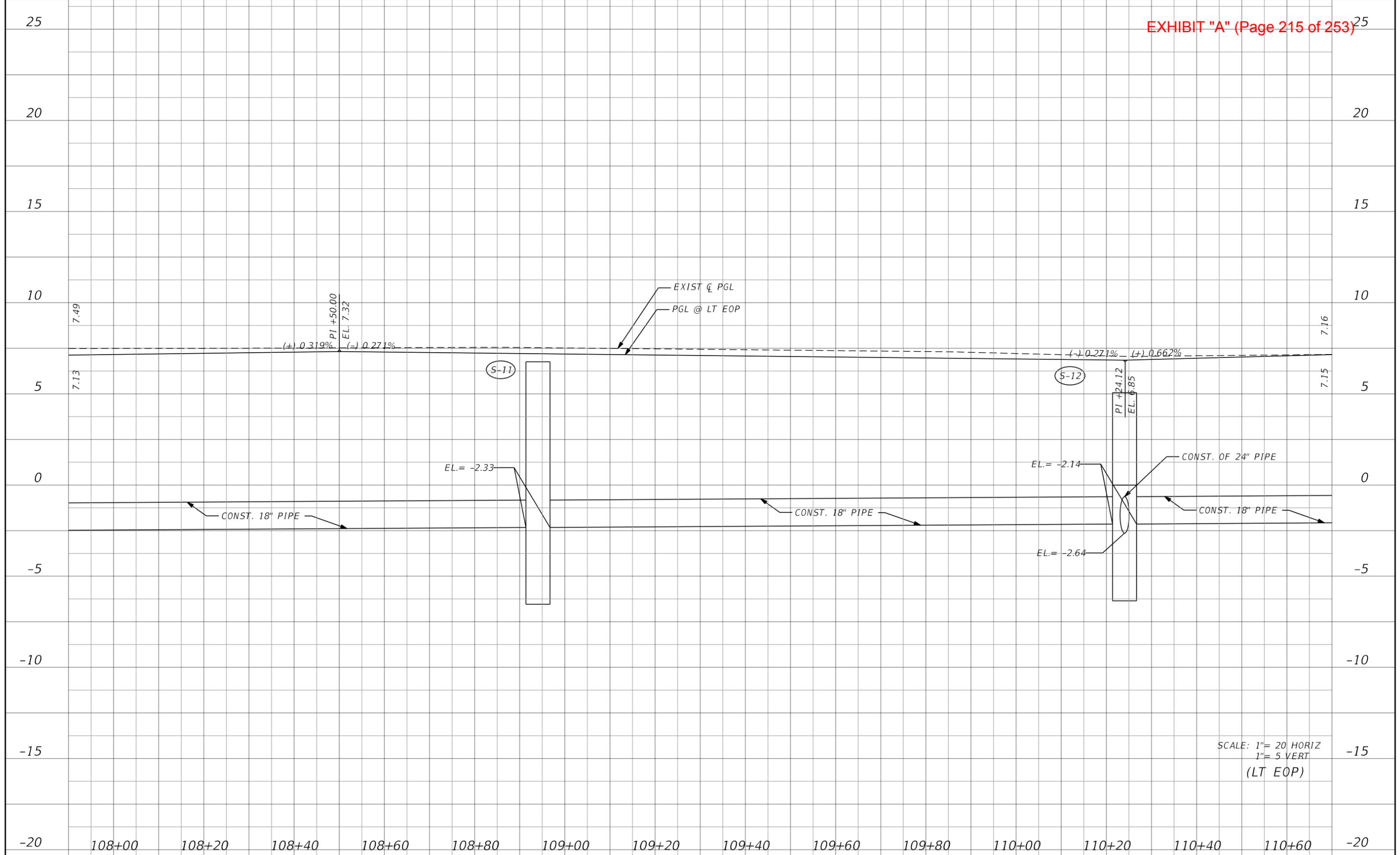
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St / Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
12



SCALE: 1" = 20' HORIZ
 1" = 5' VERT
 (LT EOP)

REVISIONS		
DATE	DESCRIPTION	DATE

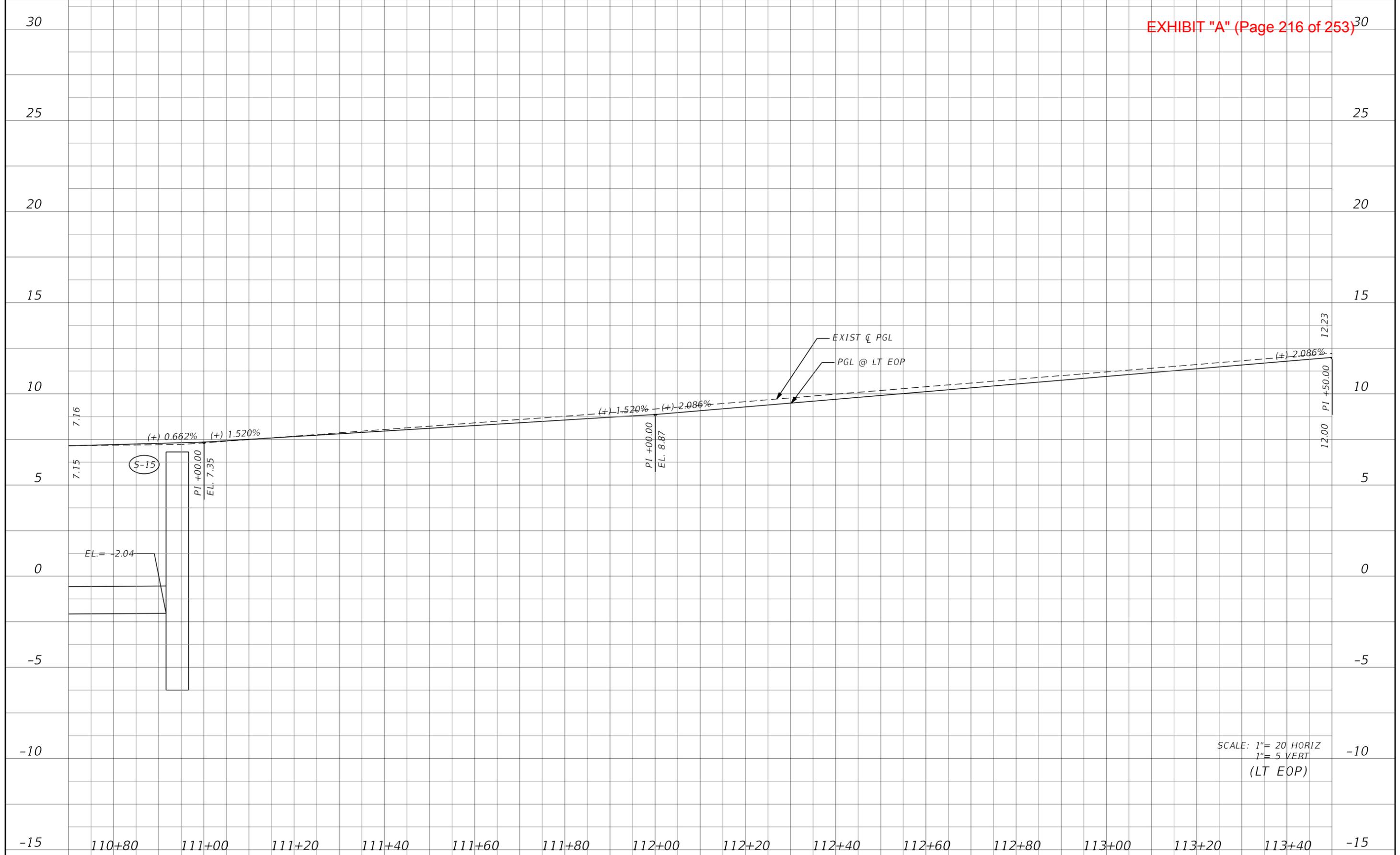
MARLIN
 ENGINEERING
 RAFAEL LAGOS, P.E. • P.E. No.: 51412
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 (305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
 13

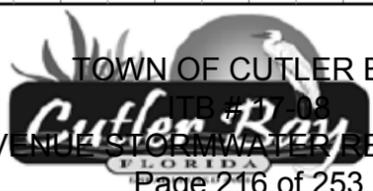


SCALE: 1" = 20' HORIZ
1" = 5' VERT
(LT EOP)

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

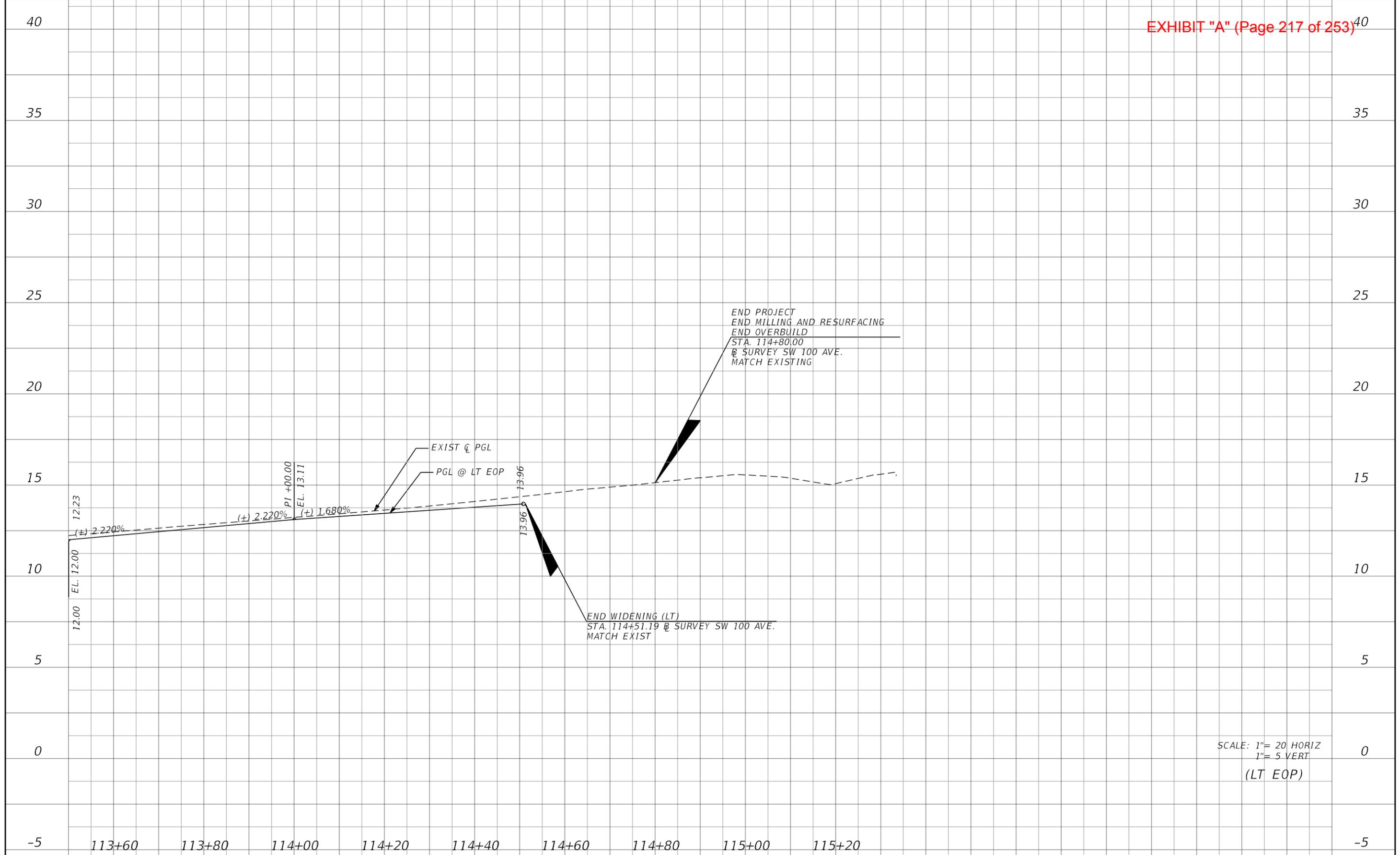
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104



TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 10TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
14



SCALE: 1" = 20' HORIZ
1" = 5' VERT
(LT EOP)

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

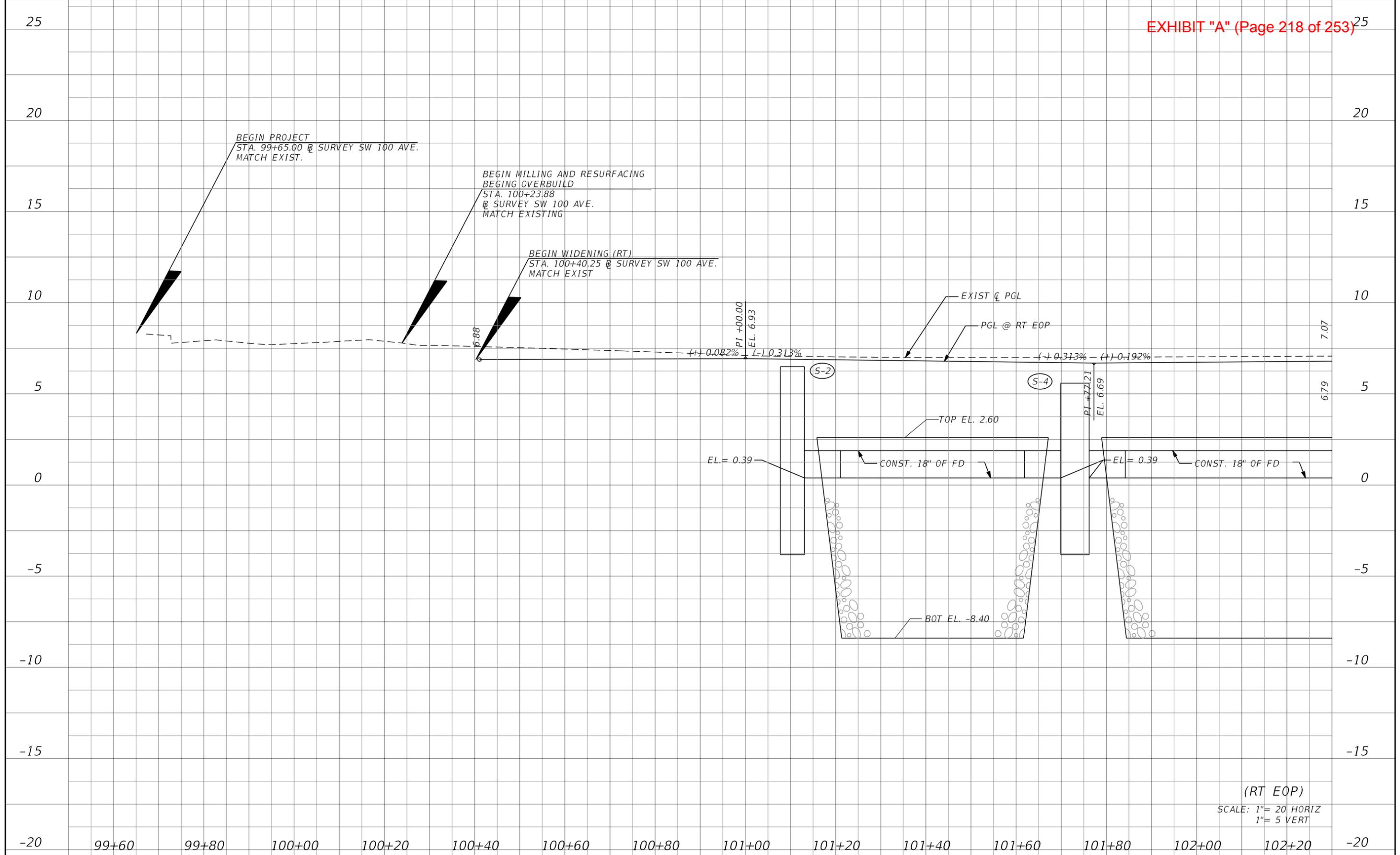
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St @ Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

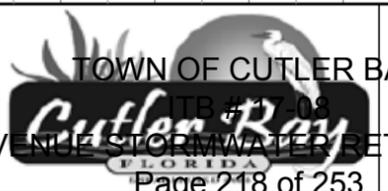
SHEET NO.
15



(RT EOP)
 SCALE: 1"= 20' HORIZ
 1"= 5' VERT

REVISIONS		
DATE	DESCRIPTION	DATE

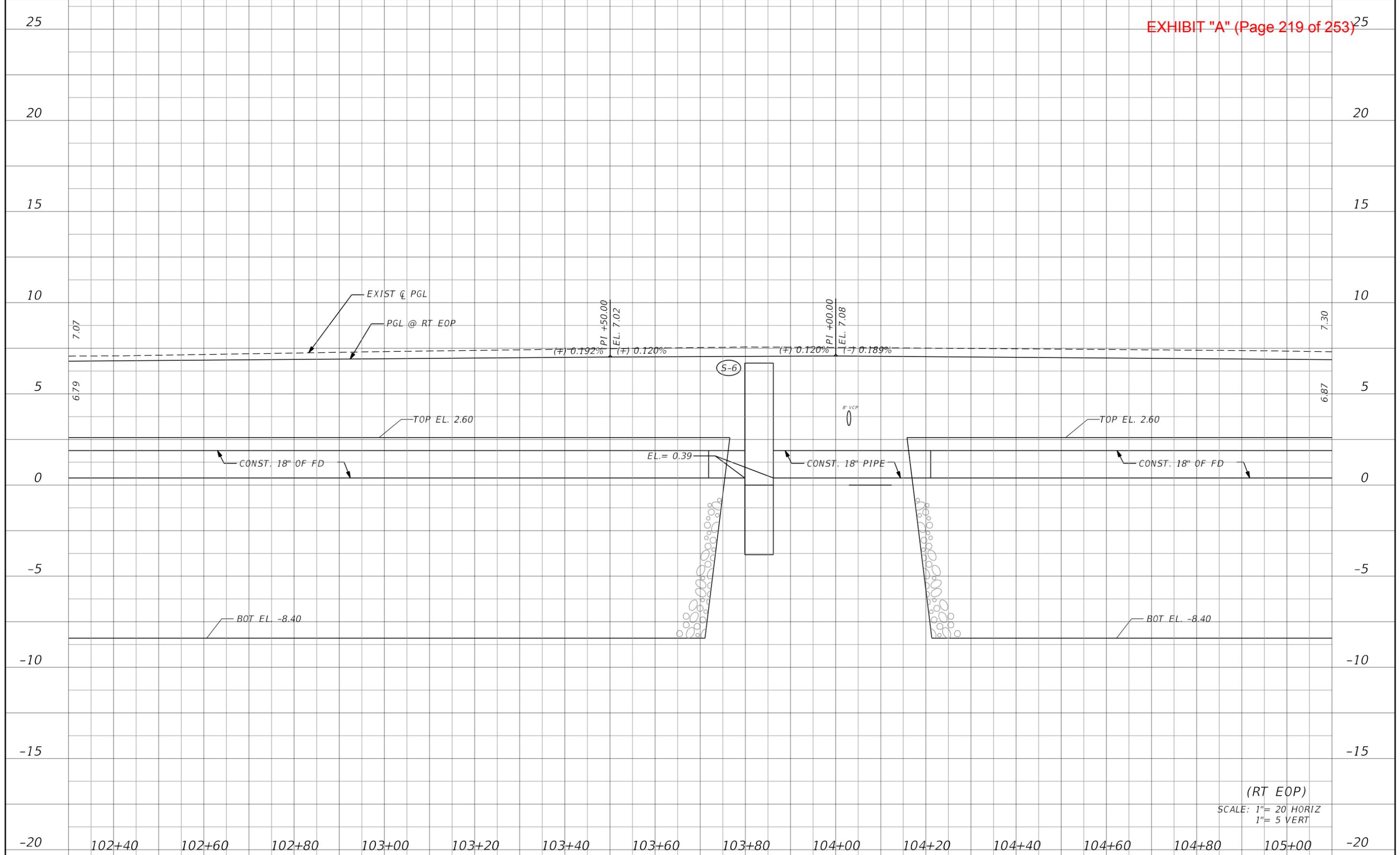
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 (305) 477-7575 • C.A. No. 6104



TOWN OF CUTLER BAY
SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST @ NAIL ROOST DR
 MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
 16



(RT EOP)
SCALE: 1"= 20' HORIZ
1"= 5' VERT

REVISIONS		
DATE	DESCRIPTION	DATE

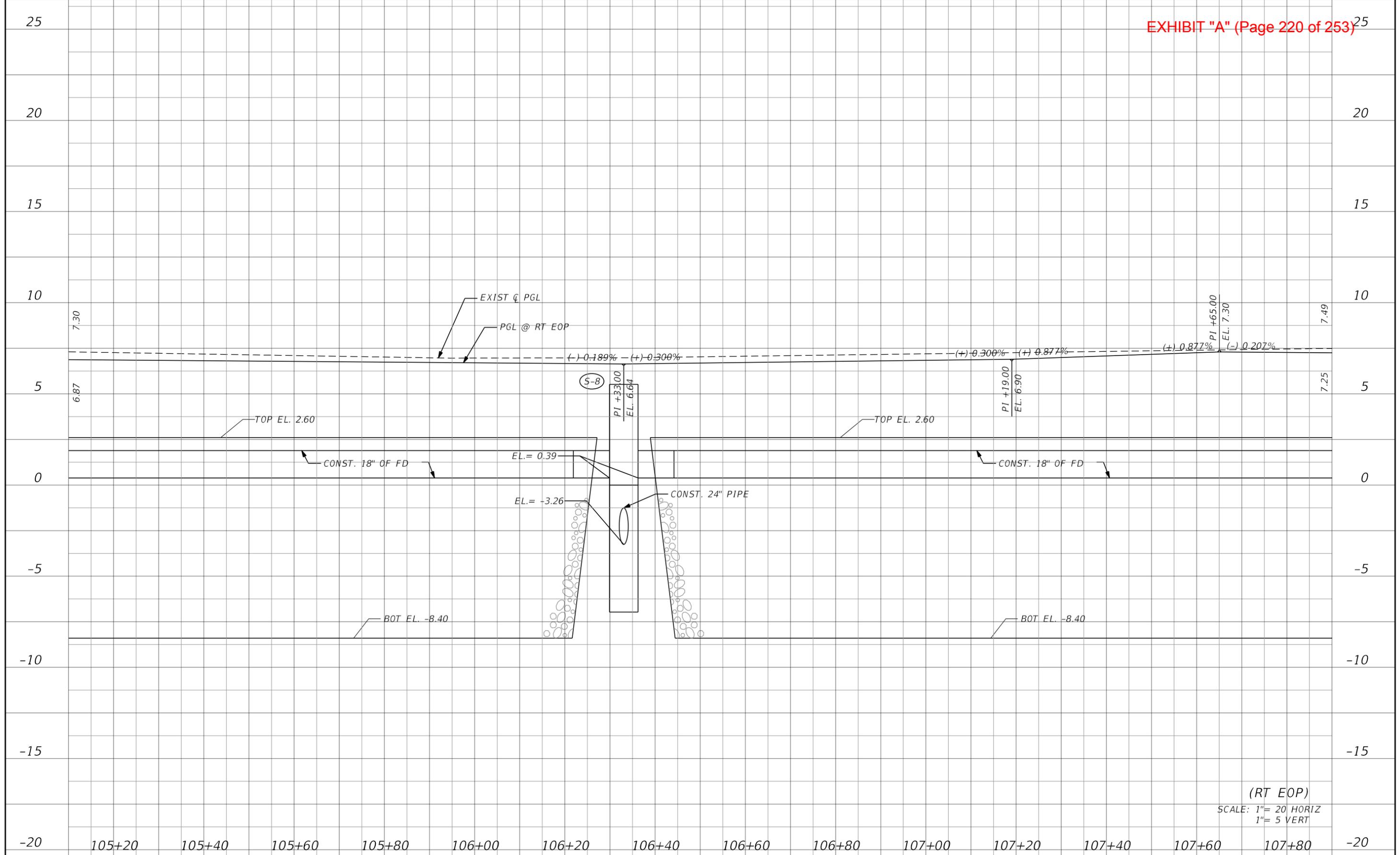
MARLIN
ENGINEERING
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project
MIAMI-DADE, FLORIDA
Page 219 of 253

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St @ Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
17



(RT EOP)
SCALE: 1"= 20' HORIZ
1"= 5' VERT

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

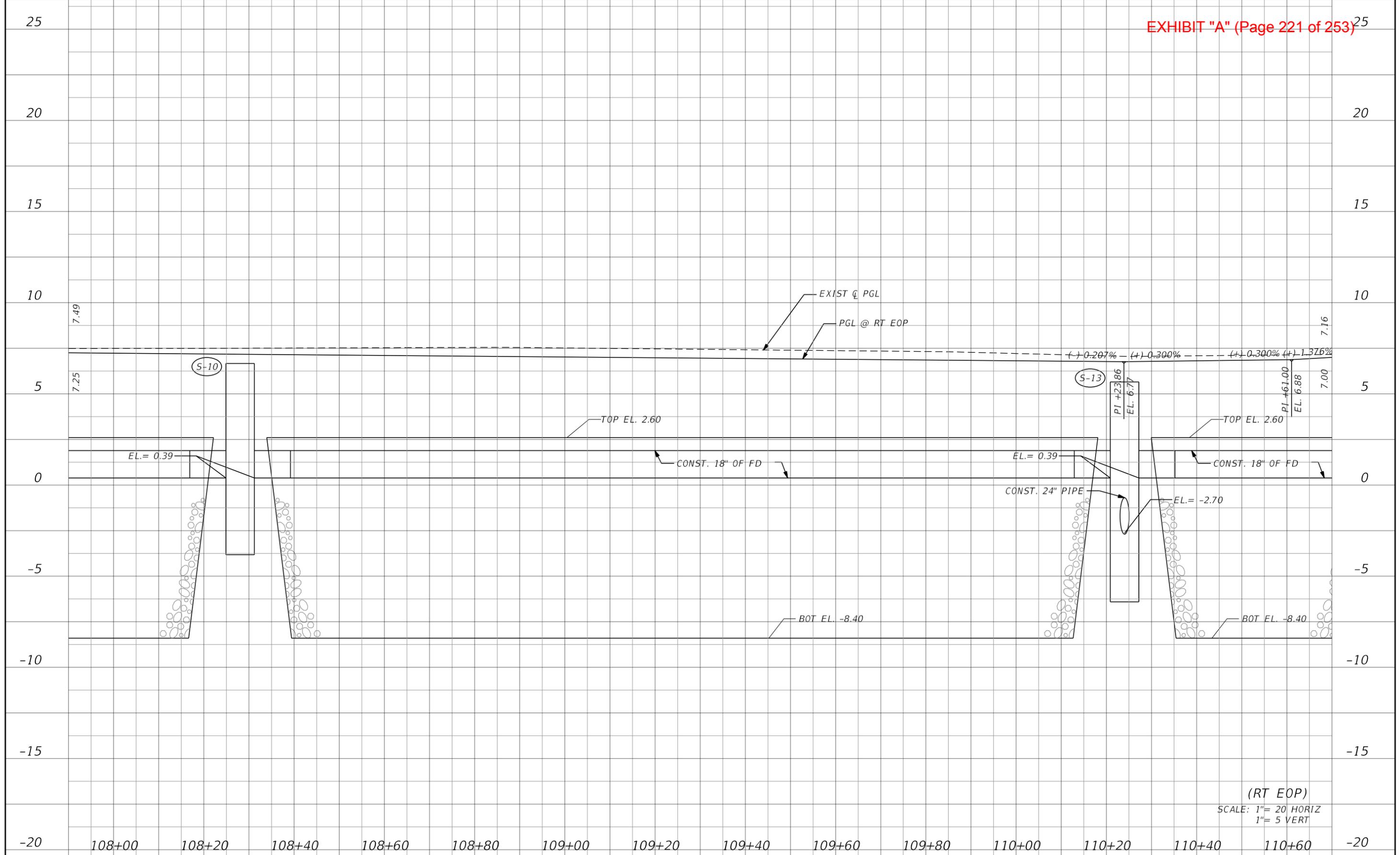
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St @ Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
18

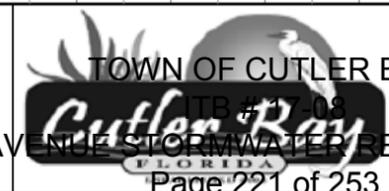


(RT EOP)
SCALE: 1" = 20' HORIZ
1" = 5' VERT

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

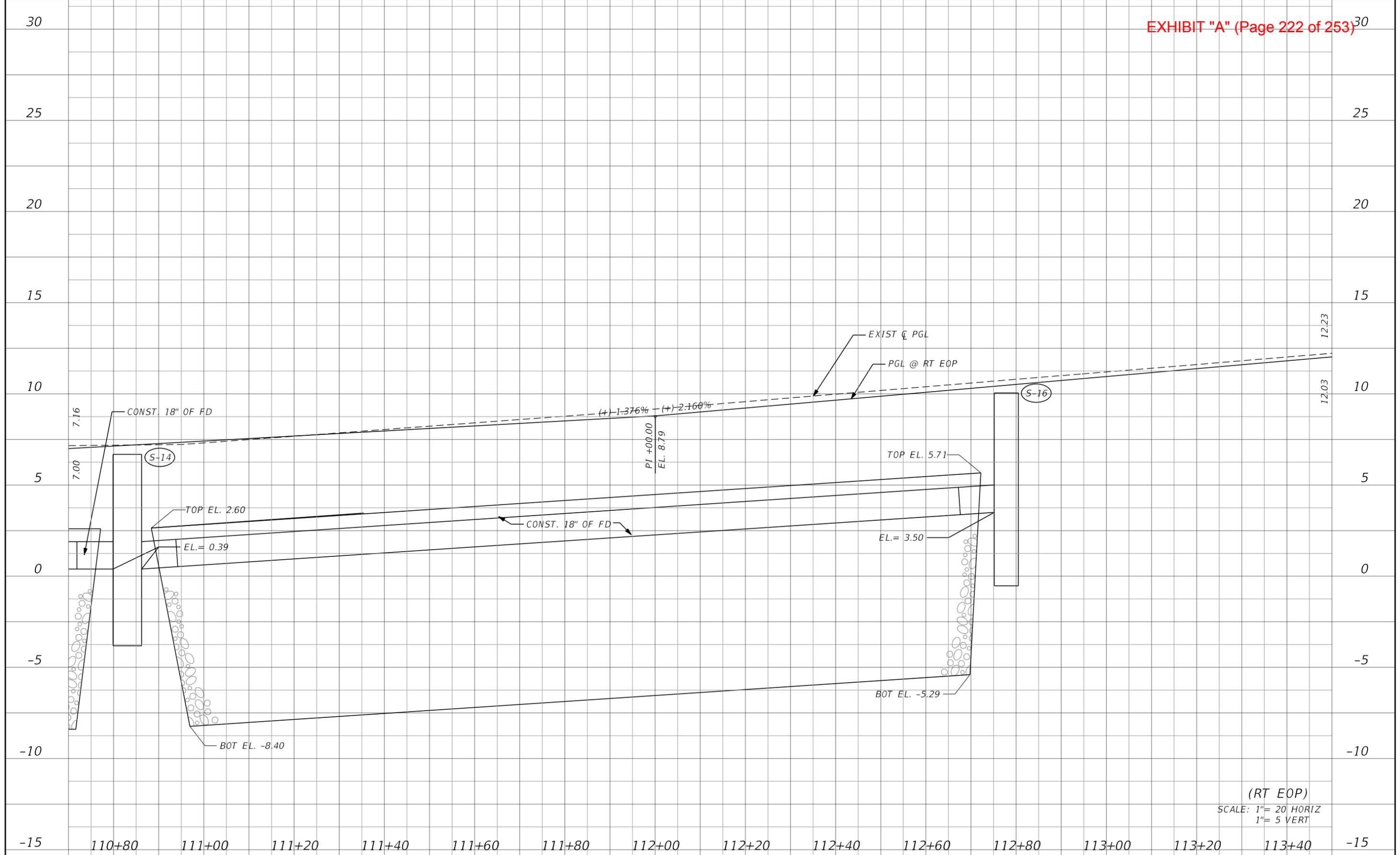
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104



TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
19



(RT EOP)
SCALE: 1"= 20 HORIZ
1"= 5 VERT

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

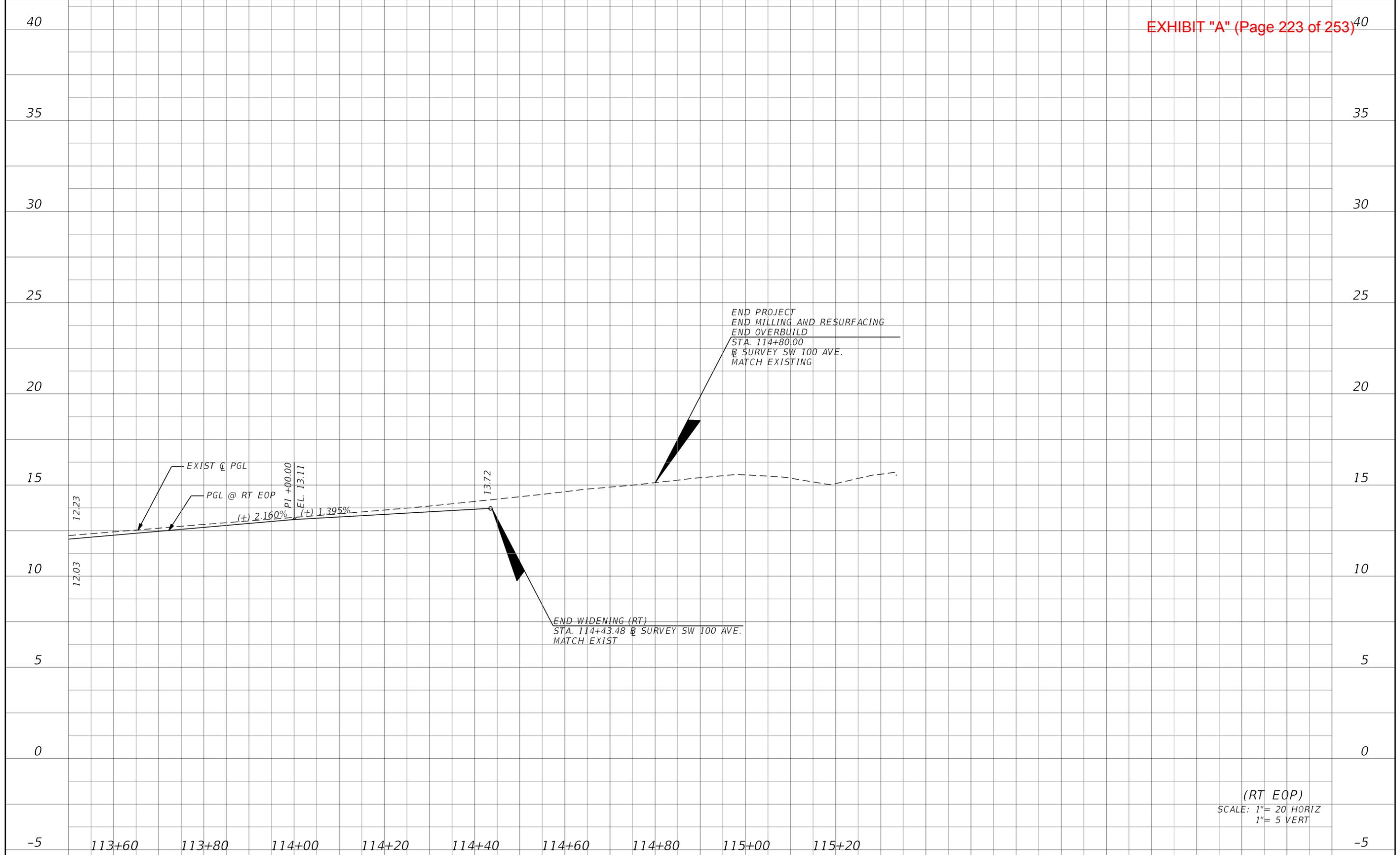
Cutler Bay
FLORIDA

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TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St @ Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.
20



REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

Cutler Bay
FLORIDA

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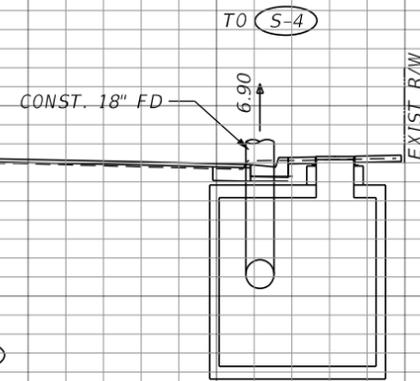
TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St @ Nail Roost Dr
MIAMI-DADE, FLORIDA

ROADWAY PROFILE

SHEET NO.	21
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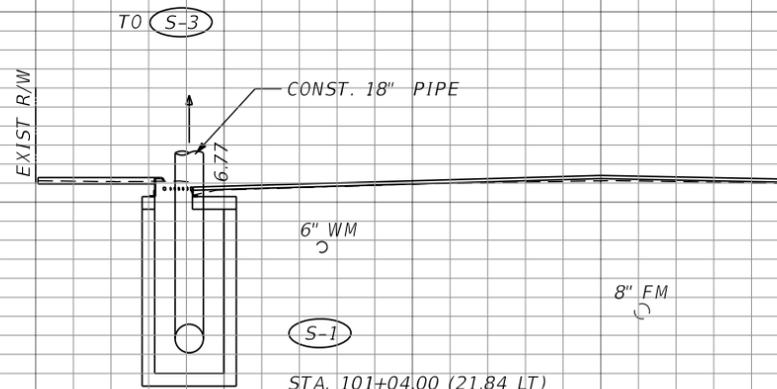
← SURVEY SW 100 AVE



(S-2)
 STA. 101+10.00 (26.00 RT)
 CONST. MANHOLE TYPE I
 J-BOTTOM (4' X 8')
 CONST. SKIMMER TYPE II (AH.)
 INDEX NOS. 200, 201 & 241
 GRATE EL. +7.32
 INVERT EL. +0.39
 BOTT EL. -3.70

(S-2)
 101+10.00

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(S-1)
 STA. 101+04.00 (21.84 LT)
 CONST. CURB INLET TYPE J-9 (4' X 4')
 INDEX NOS. 200, 201 & 214
 GRATE EL. +6.77
 INVERT EL. -1.94
 BOTT EL. -3.00

(S-1)
 101+04.00

← SURVEY SW 100 AVE

SCALE: 1" = 10' HORIZ.
 1" = 10' VERT.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
 ENGINEERING
 RAFAEL LAGOS, P.E. • P.E. No.: 51412
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 (305) 477-7575 • C.A. No. 6104

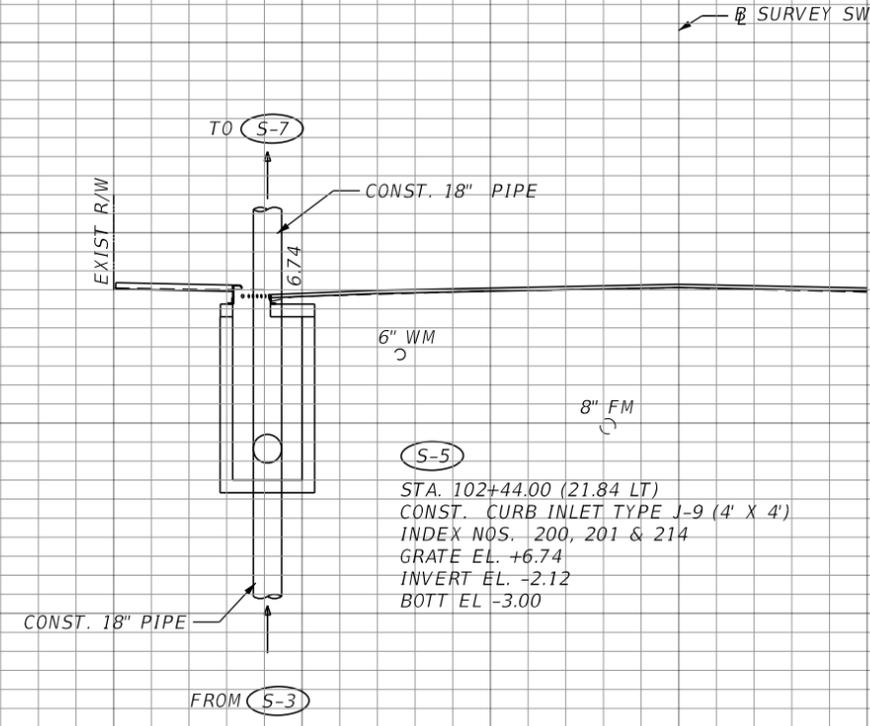
TOWN OF CUTLER BAY
 SW 100TH AVENUE STORMWATER RETROFIT PROJECT
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST @ NAIL ROOST DR
 MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
 22

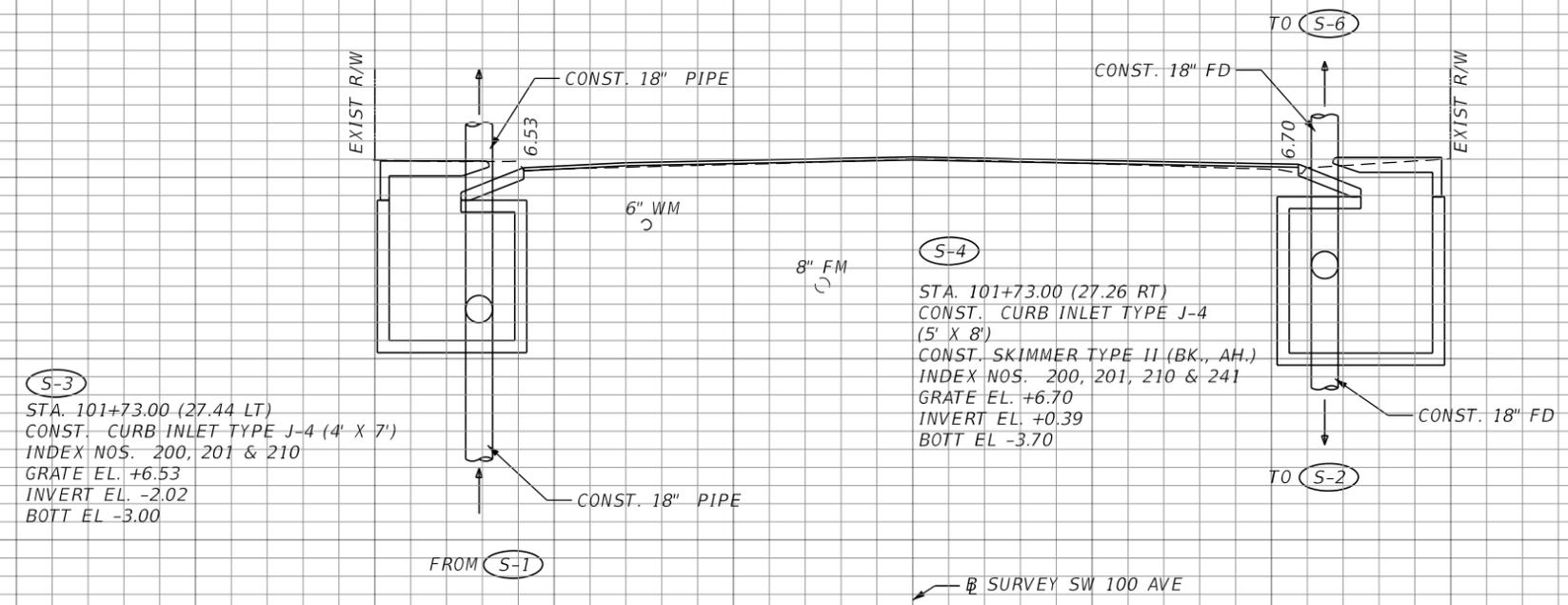
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(S-5)
STA. 102+44.00 (21.84 LT)
CONST. CURB INLET TYPE J-9 (4' X 4')
INDEX NOS. 200, 201 & 214
GRATE EL. +6.74
INVERT EL. -2.12
BOTT EL. -3.00

(S-5)
102+44.00

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(S-3)
STA. 101+73.00 (27.44 LT)
CONST. CURB INLET TYPE J-4 (4' X 7')
INDEX NOS. 200, 201 & 210
GRATE EL. +6.53
INVERT EL. -2.02
BOTT EL. -3.00

(S-4)
STA. 101+73.00 (27.26 RT)
CONST. CURB INLET TYPE J-4 (5' X 8')
CONST. SKIMMER TYPE II (BK., AH.)
INDEX NOS. 200, 201, 210 & 241
GRATE EL. +6.70
INVERT EL. +0.39
BOTT EL. -3.70

(S-3), (S-4)
101+73.00

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING
RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project
MIAMI-DADE, FLORIDA

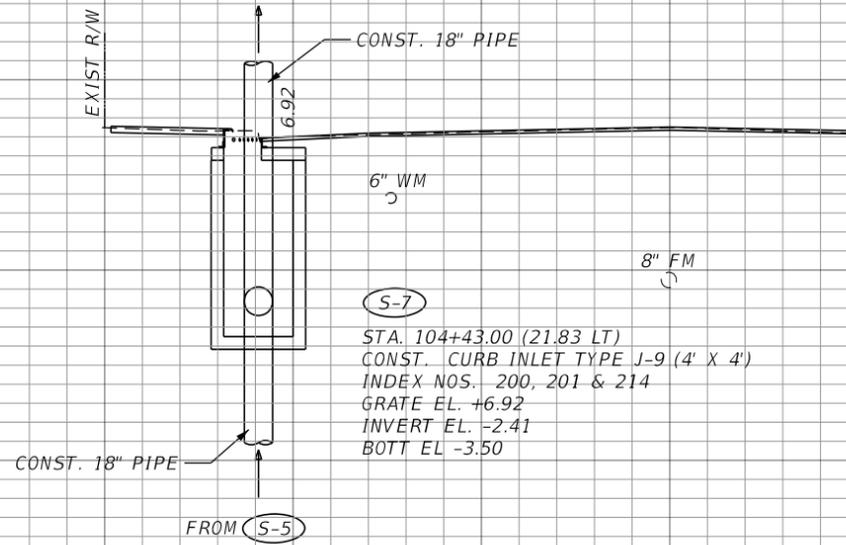
TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St / Nail Roost Dr
MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
23

← SURVEY SW 100 AVE

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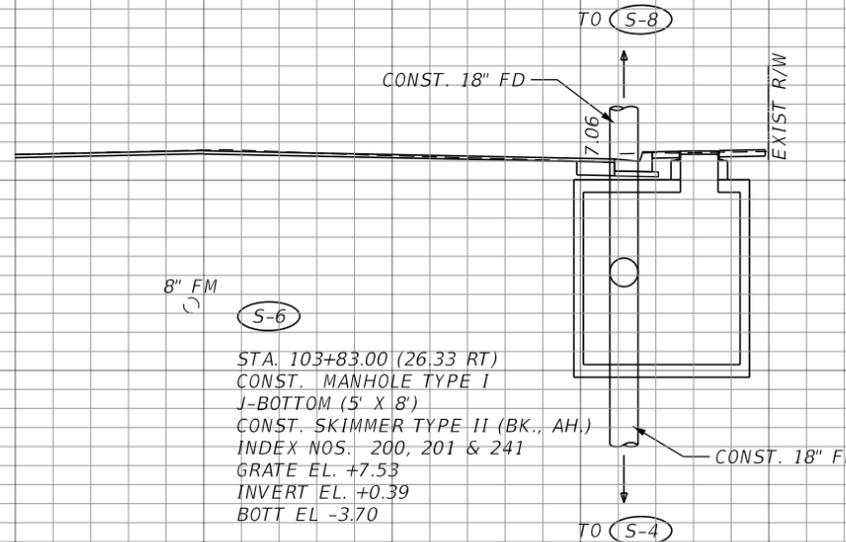


(S-7)
STA. 104+43.00 (21.83 LT)
CONST. CURB INLET TYPE J-9 (4' X 4')
INDEX NOS. 200, 201 & 214
GRATE EL. +6.92
INVERT EL. -2.41
BOTT EL. -3.50

(S-7)

104+43.00

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(S-6)
STA. 103+83.00 (26.33 RT)
CONST. MANHOLE TYPE I
J-BOTTOM (5' X 8')
CONST. SKIMMER TYPE II (BK., AH.)
INDEX NOS. 200, 201 & 241
GRATE EL. +7.53
INVERT EL. +0.39
BOTT EL. -3.70

(S-6)

103+83.00

← SURVEY SW 100 AVE

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING
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(305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
SW 100TH AVENUE STORMWATER RETROFIT PROJECT
MIAMI-DADE, FLORIDA
Page 226 of 253

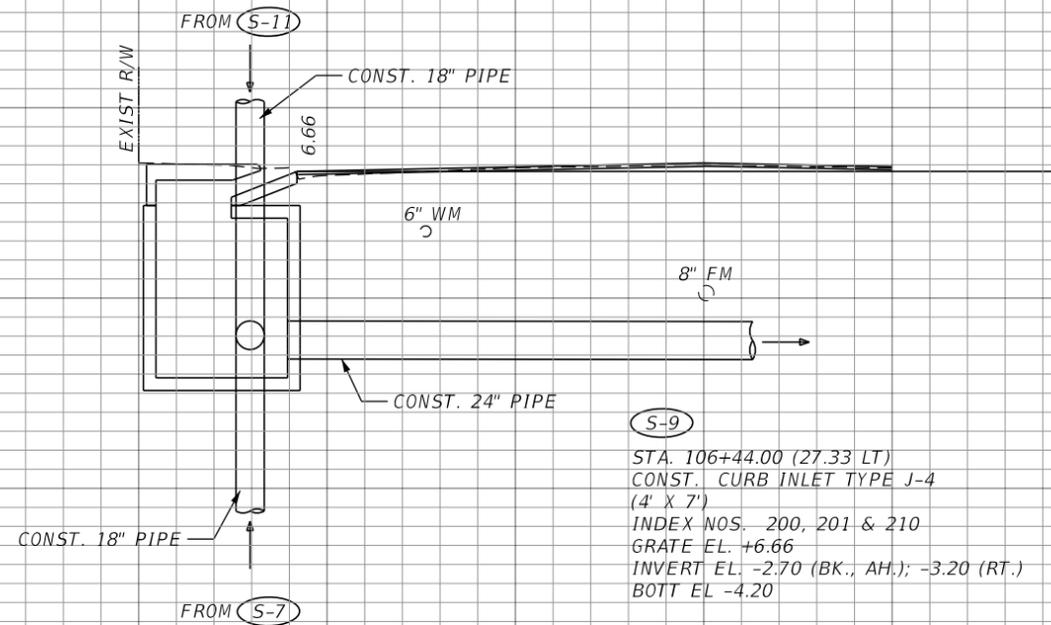
TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
24

← SURVEY SW 100 AVE

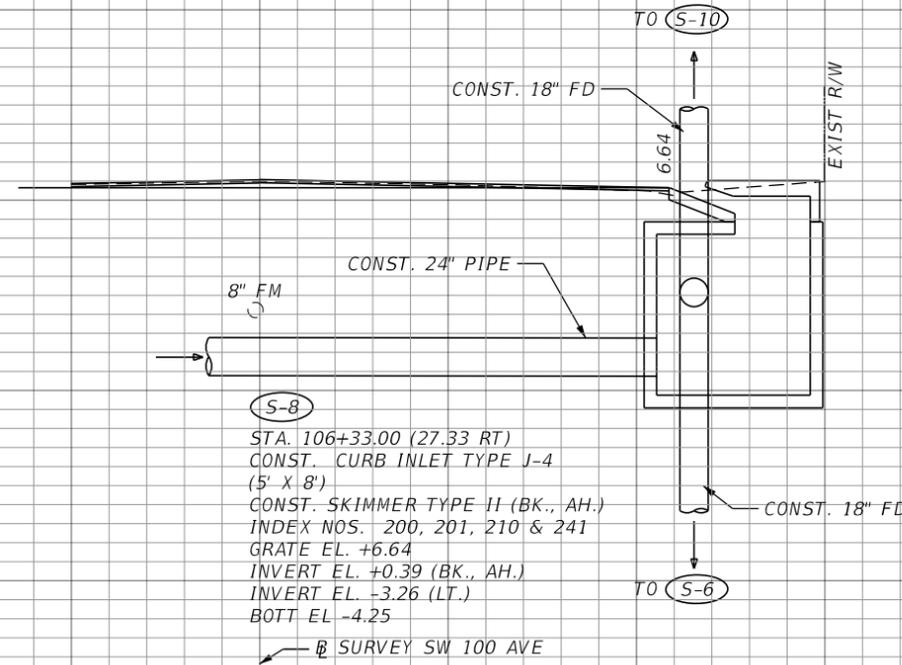
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(S-9)
STA. 106+44.00 (27.33 LT)
CONST. CURB INLET TYPE J-4
(4' X 7')
INDEX NOS. 200, 201 & 210
GRATE EL. +6.66
INVERT EL. -2.70 (BK., AH.); -3.20 (RT.)
BOTT EL. -4.20

(S-9)
106+44.00

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(S-8)
STA. 106+33.00 (27.33 RT)
CONST. CURB INLET TYPE J-4
(5' X 8')
CONST. SKIMMER TYPE II (BK., AH.)
INDEX NOS. 200, 201, 210 & 241
GRATE EL. +6.64
INVERT EL. +0.39 (BK., AH.)
INVERT EL. -3.26 (LT.)
BOTT EL. -4.25

(S-8)
106+33.00

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN ENGINEERING
 RAFAEL LAGOS, P.E. • P.E. No.: 51412
 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33317
 (305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

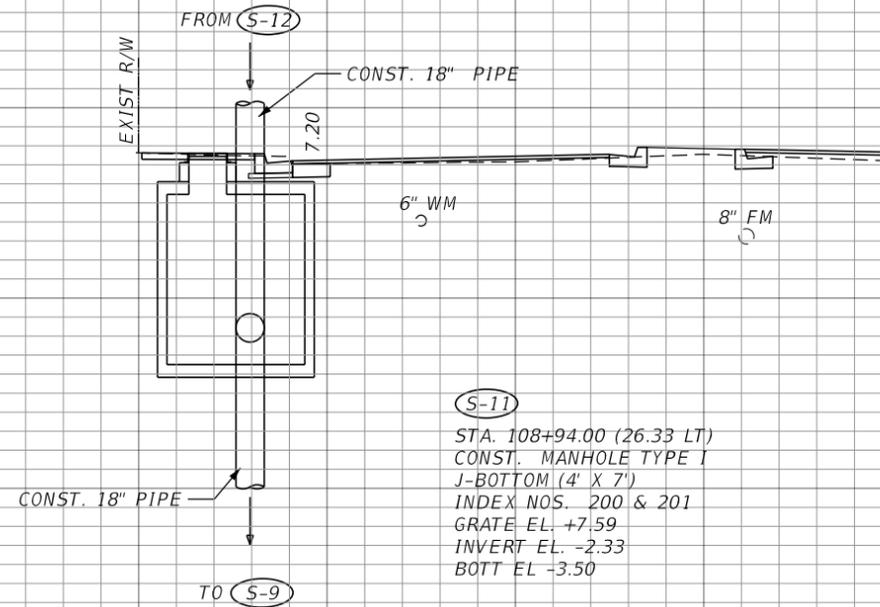
TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
25

← SURVEY SW 100 AVE

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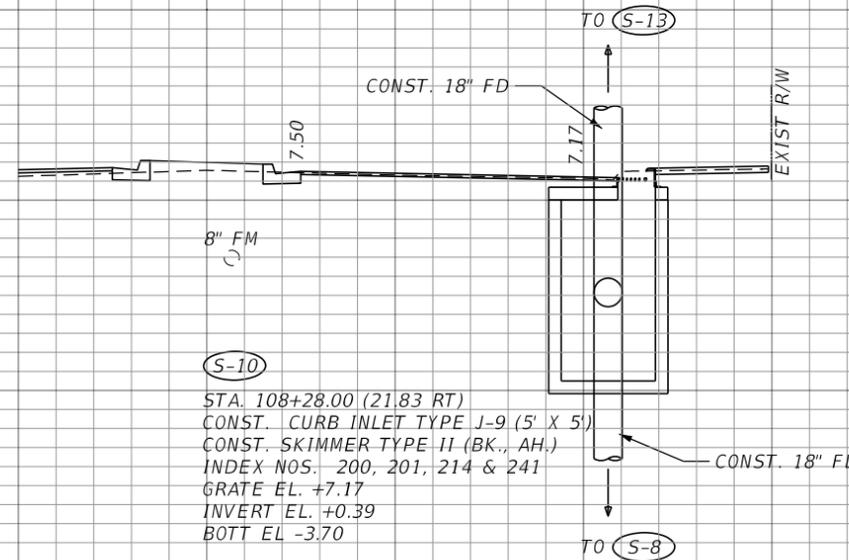


(S-11)
STA. 108+94.00 (26.33 LT)
CONST. MANHOLE TYPE I
J-BOTTOM (4' X 7')
INDEX NOS. 200 & 201
GRATE EL. +7.59
INVERT EL. -2.33
BOTT EL. -3.50

(S-11)

108+94.00

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(S-10)
STA. 108+28.00 (21.83 RT)
CONST. CURB INLET TYPE J-9 (5' X 5')
CONST. SKIMMER TYPE II (BK., AH.)
INDEX NOS. 200, 201, 214 & 241
GRATE EL. +7.17
INVERT EL. +0.39
BOTT EL. -3.70

(S-10)

108+28.00

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

← SURVEY SW 100 AVE

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING
RAFAEL LAGOS, P.E. • P.E. No.: 51412
1700 NW 66 Ave., Ste. 106 • Plantation, FL 33317
(305) 477-7575 • C.A. No. 6104

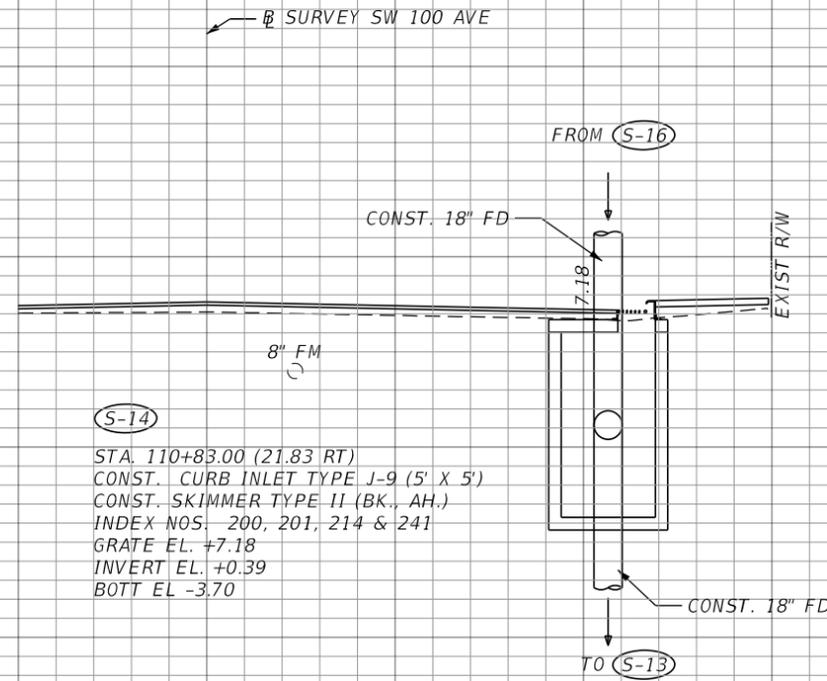
TOWN OF CUTLER BAY
SW 100TH AVENUE STORMWATER RETROFIT PROJECT
MIAMI-DADE, FLORIDA
Page 228 of 253

TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ NAIL ROOST DR
MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
26

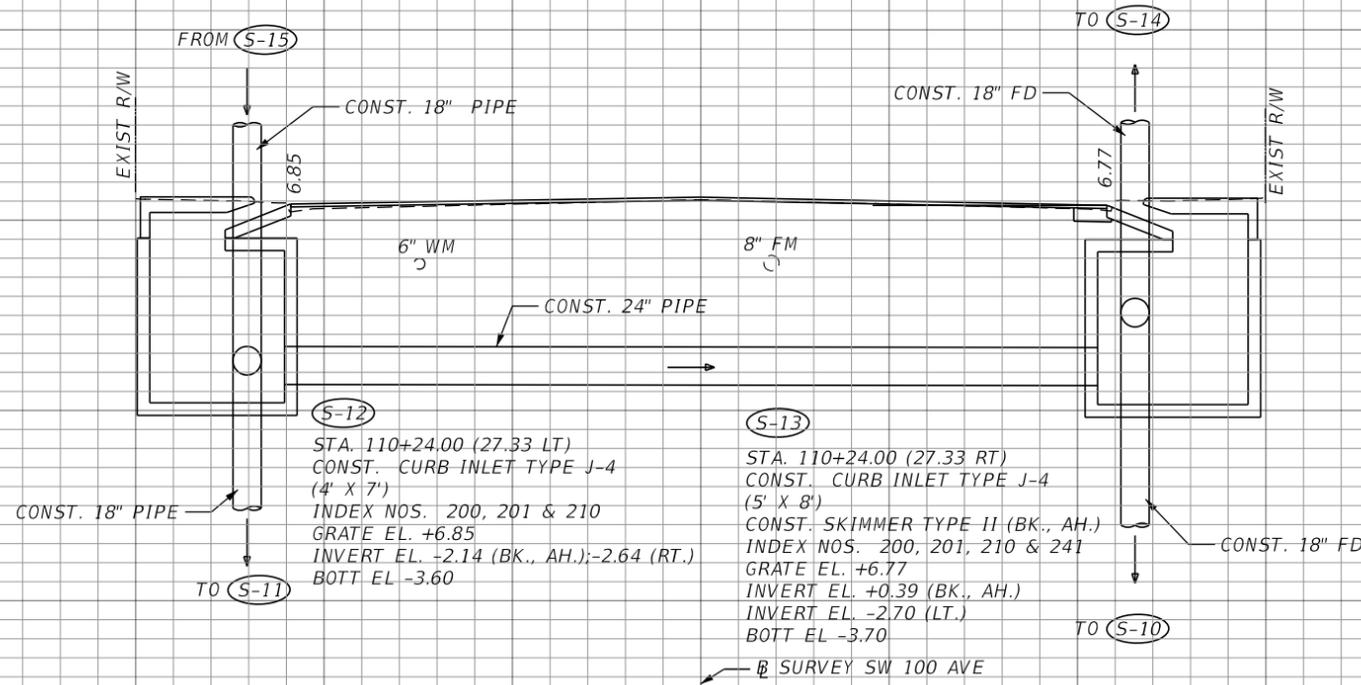
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(S-14)
STA. 110+83.00 (21.83 RT)
CONST. CURB INLET TYPE J-9 (5' X 5')
CONST. SKIMMER TYPE II (BK., AH.)
INDEX NOS. 200, 201, 214 & 241
GRATE EL. +7.18
INVERT EL. +0.39
BOTT EL. -3.70

(S-14)
110+83.00

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(S-12)
STA. 110+24.00 (27.33 LT)
CONST. CURB INLET TYPE J-4 (4' X 7')
INDEX NOS. 200, 201 & 210
GRATE EL. +6.85
INVERT EL. -2.14 (BK., AH.); -2.64 (RT.)
BOTT EL. -3.60

(S-13)
STA. 110+24.00 (27.33 RT)
CONST. CURB INLET TYPE J-4 (5' X 8')
CONST. SKIMMER TYPE II (BK., AH.)
INDEX NOS. 200, 201, 210 & 241
GRATE EL. +6.77
INVERT EL. +0.39 (BK., AH.)
INVERT EL. -2.70 (LT.)
BOTT EL. -3.70

(S-12), (S-13)
110+24.00

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

RAFAEL LAGOS, P.E. • P.E. No.: 51412
1700 NW 66 Ave., Ste. 106 • Plantation, FL 33331
(305) 477-7575 • C.A. No. 6104

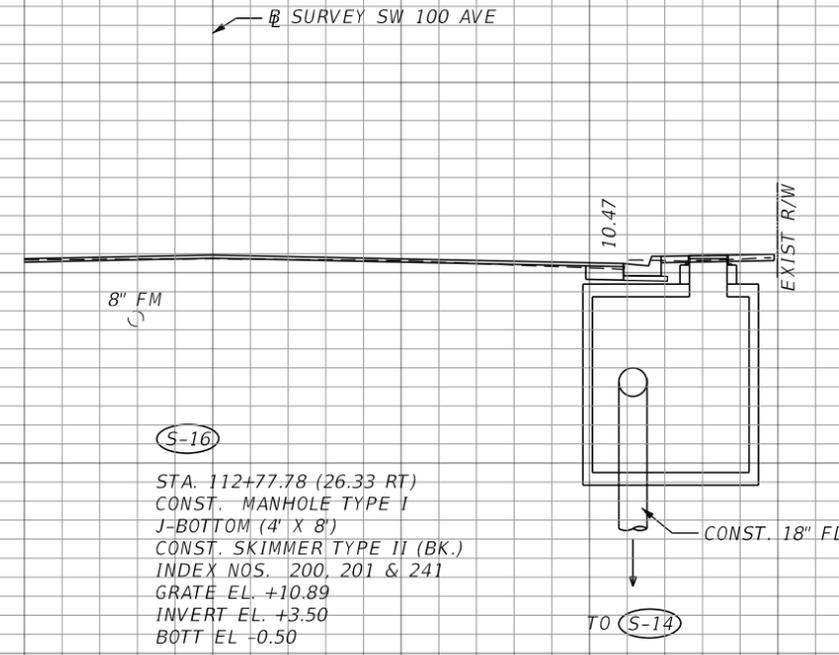
TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project
MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St / Nail Roost Dr
MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
27

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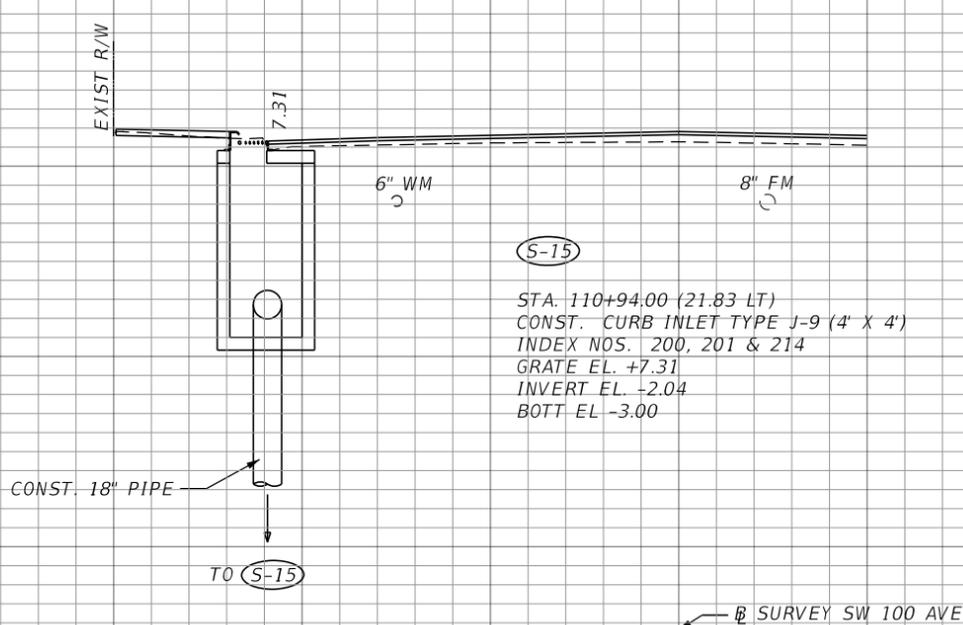
(S-16)

STA. 112+77.78 (26.33 RT)
CONST. MANHOLE TYPE I
J-BOTTOM (4' X 8')
CONST. SKIMMER TYPE II (BK.)
INDEX NOS. 200, 201 & 241
GRATE EL. +10.89
INVERT EL. +3.50
BOTT EL. -0.50

(S-16)

112+77.78

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-10



(S-15)

STA. 110+94.00 (21.83 LT)
CONST. CURB INLET TYPE J-9 (4' X 4')
INDEX NOS. 200, 201 & 214
GRATE EL. +7.31
INVERT EL. -2.04
BOTT EL. -3.00

(S-15)

110+94.00

SCALE: 1" = 10' HORIZ.
1" = 10' VERT.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

REVISIONS		
DATE	DESCRIPTION	DATE

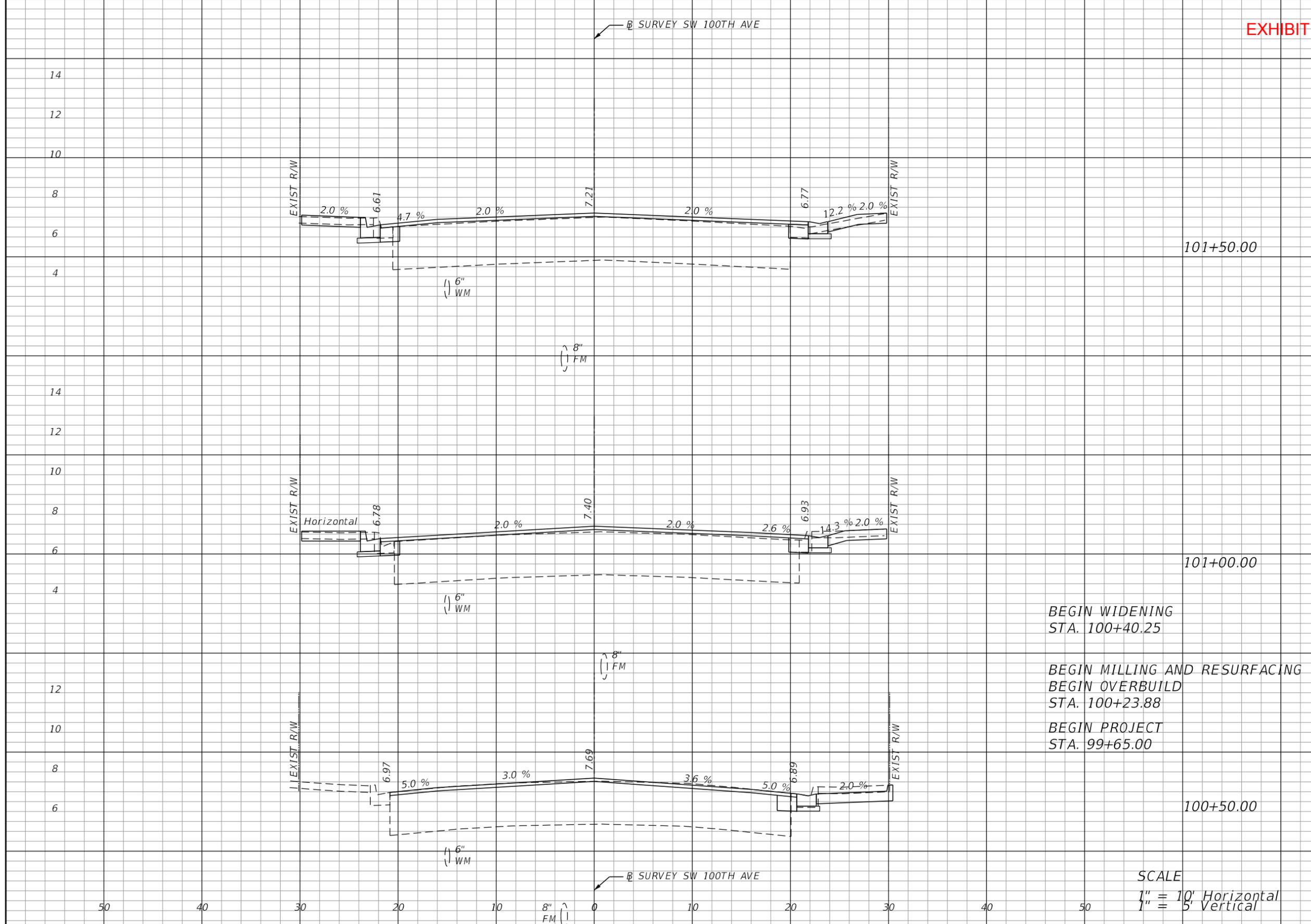
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TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project
MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 100th St / Nail Roost Dr
MIAMI-DADE, FLORIDA

DRAINAGE STRUCTURES

SHEET NO.
28



BEGIN WIDENING
 STA. 100+40.25

BEGIN MILLING AND RESURFACING
 BEGIN OVERBUILD
 STA. 100+23.88

BEGIN PROJECT
 STA. 99+65.00

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

Station	Regular Exc.	Exc.	Embankment
101+50.00	7.9	17.0	0.0
101+00.00	10.5	20.2	0.0
100+50.00	11.3	0.0	0.0

REVISIONS		
DATE	DESCRIPTION	DATE

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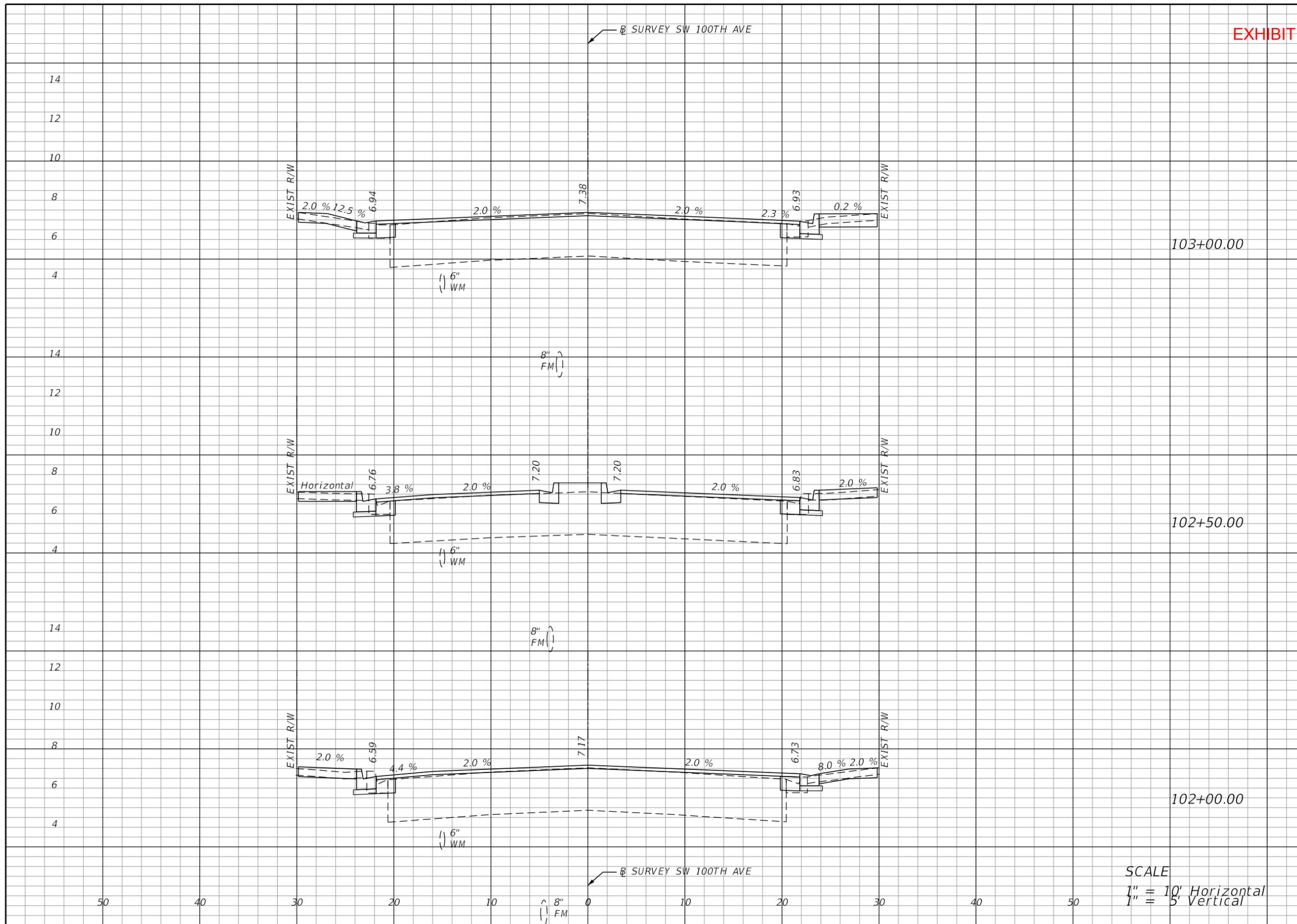
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TOWN OF CUTLER BAY
SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST @ NAIL ROOST DR
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
29



Station	Regular Exc.	Embankment
103+00.00	9.2	0.0
102+50.00	11.6	4.2
102+00.00	6.4	0.0

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

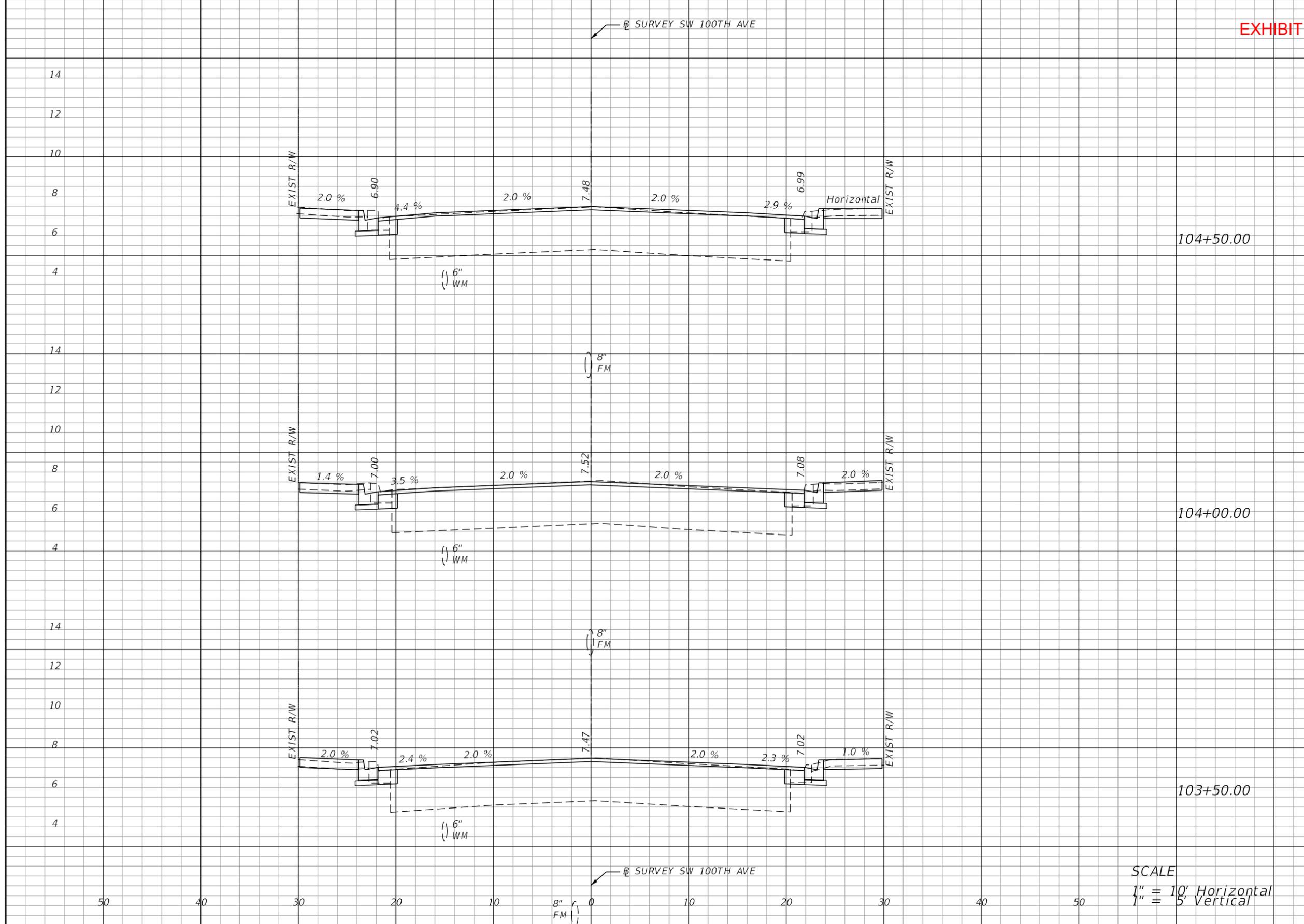
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
 30



11.8	21.4	0.0	0.0
11.3	18.6	0.0	0.0
8.8	16.7	0.0	0.0

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

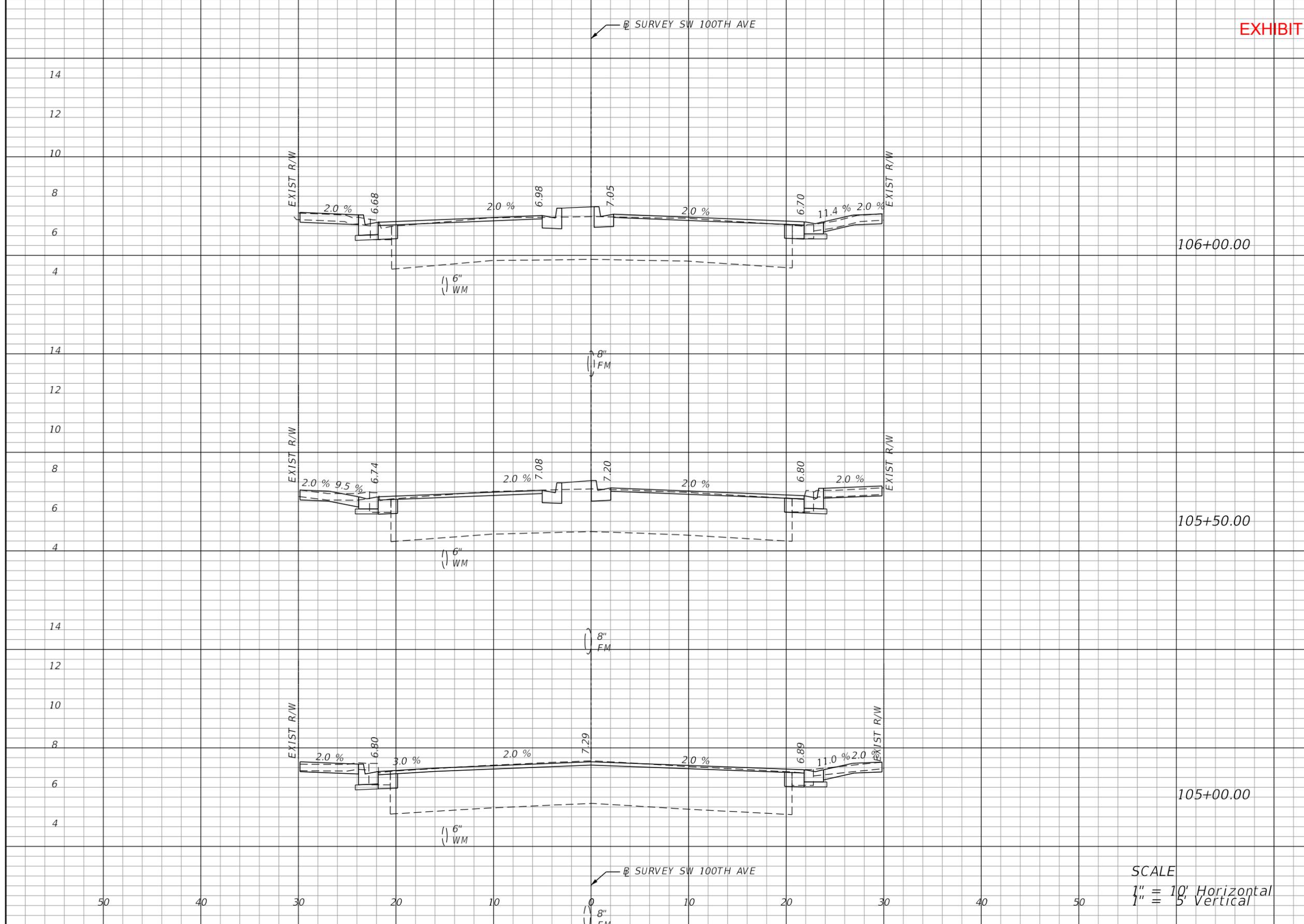
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
31



Station	Regular Exc.	Embankment
106+00.00	12.1	3.2
105+50.00	13.6	2.3
105+00.00	10.2	0.0

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

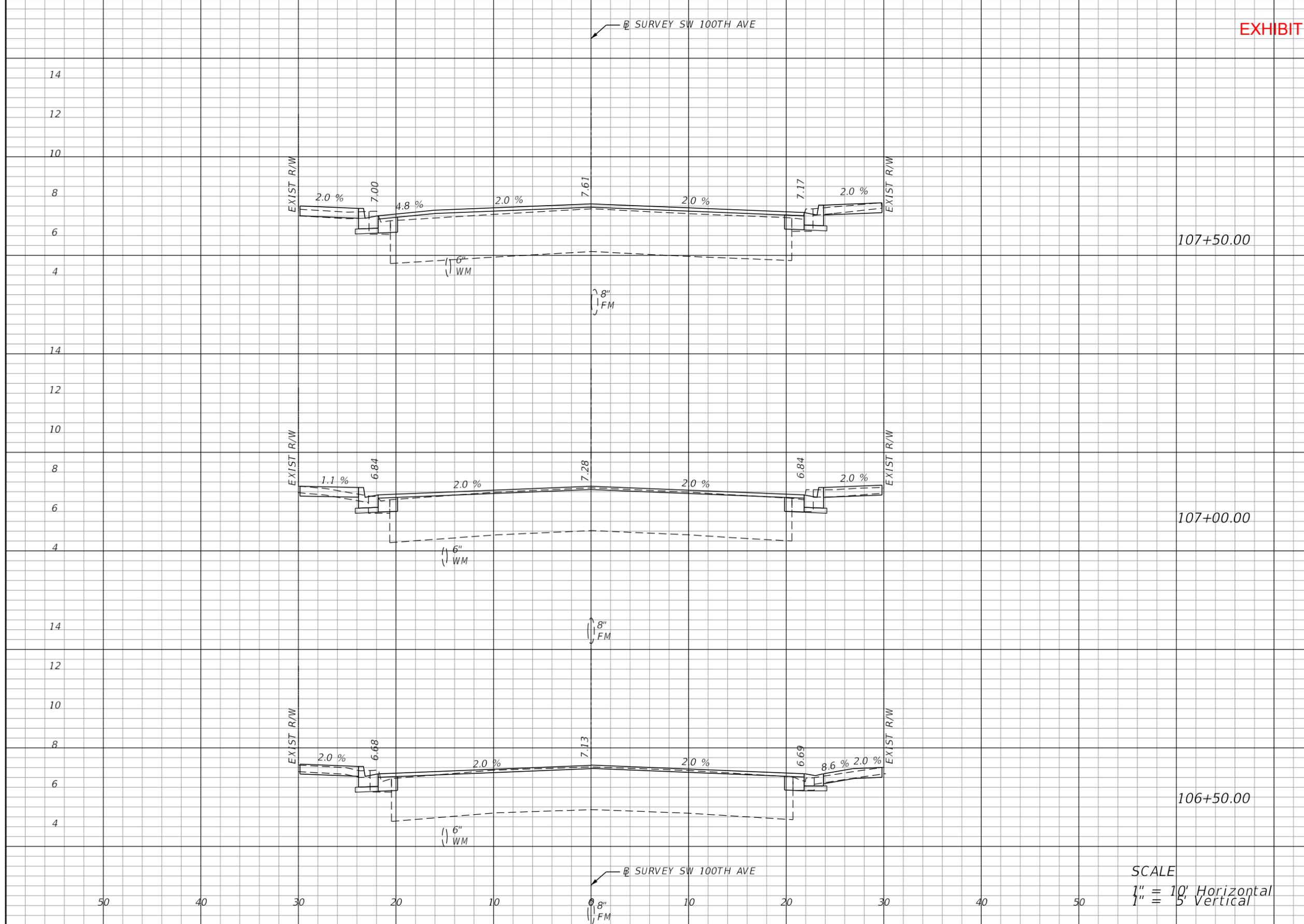
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
 32



Station	Regular Exc.	Embankment
107+50.00	12.3	1.5
107+00.00	10.1	0.8
106+50.00	17.2	3.1

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

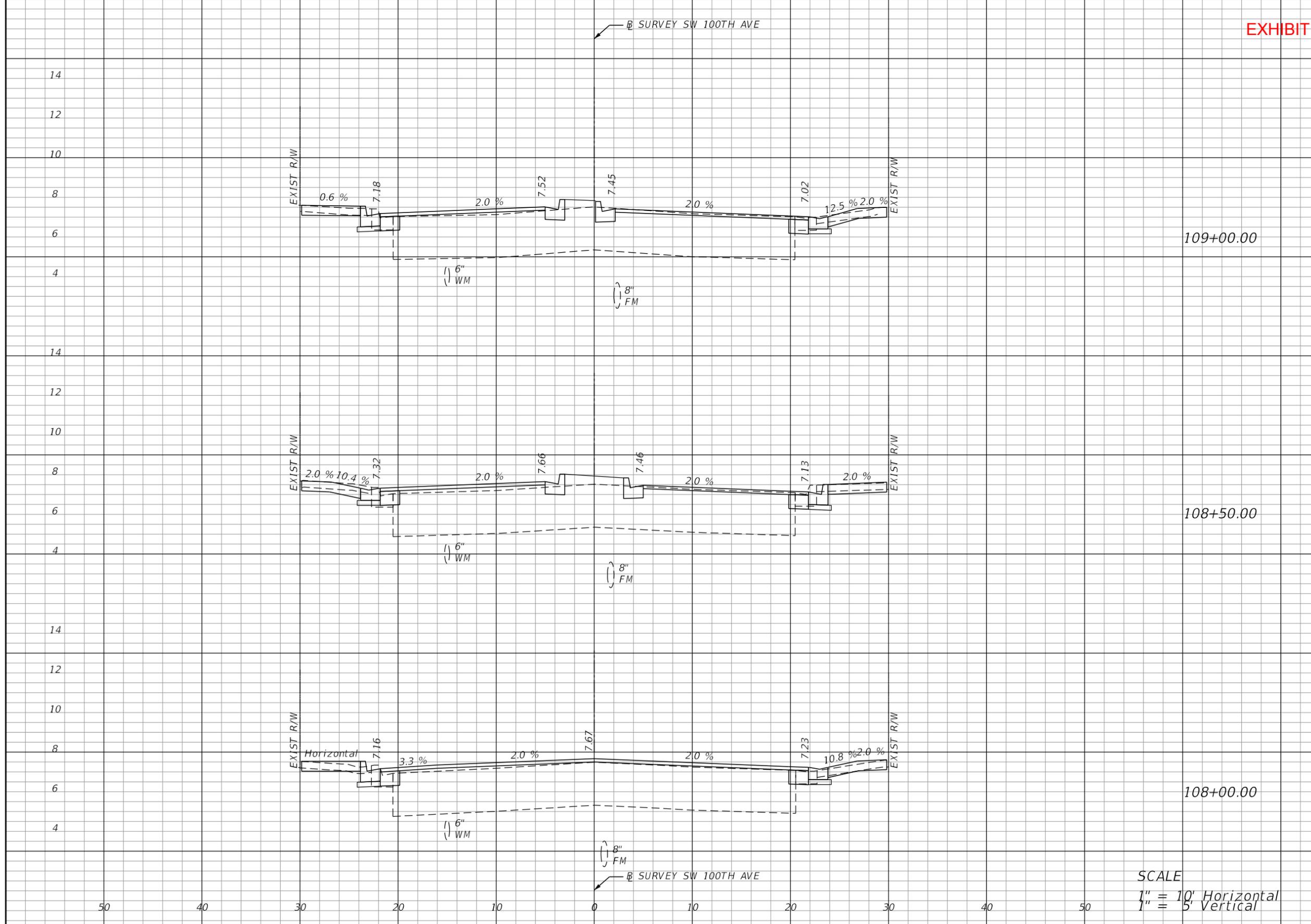
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
 33



Stationing	Regular Exc.	Exc.	Embankment
109+00.00	13.4	25.8	7.7
108+50.00	14.5	19.4	5.8
108+00.00	6.4	12.3	1.2

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

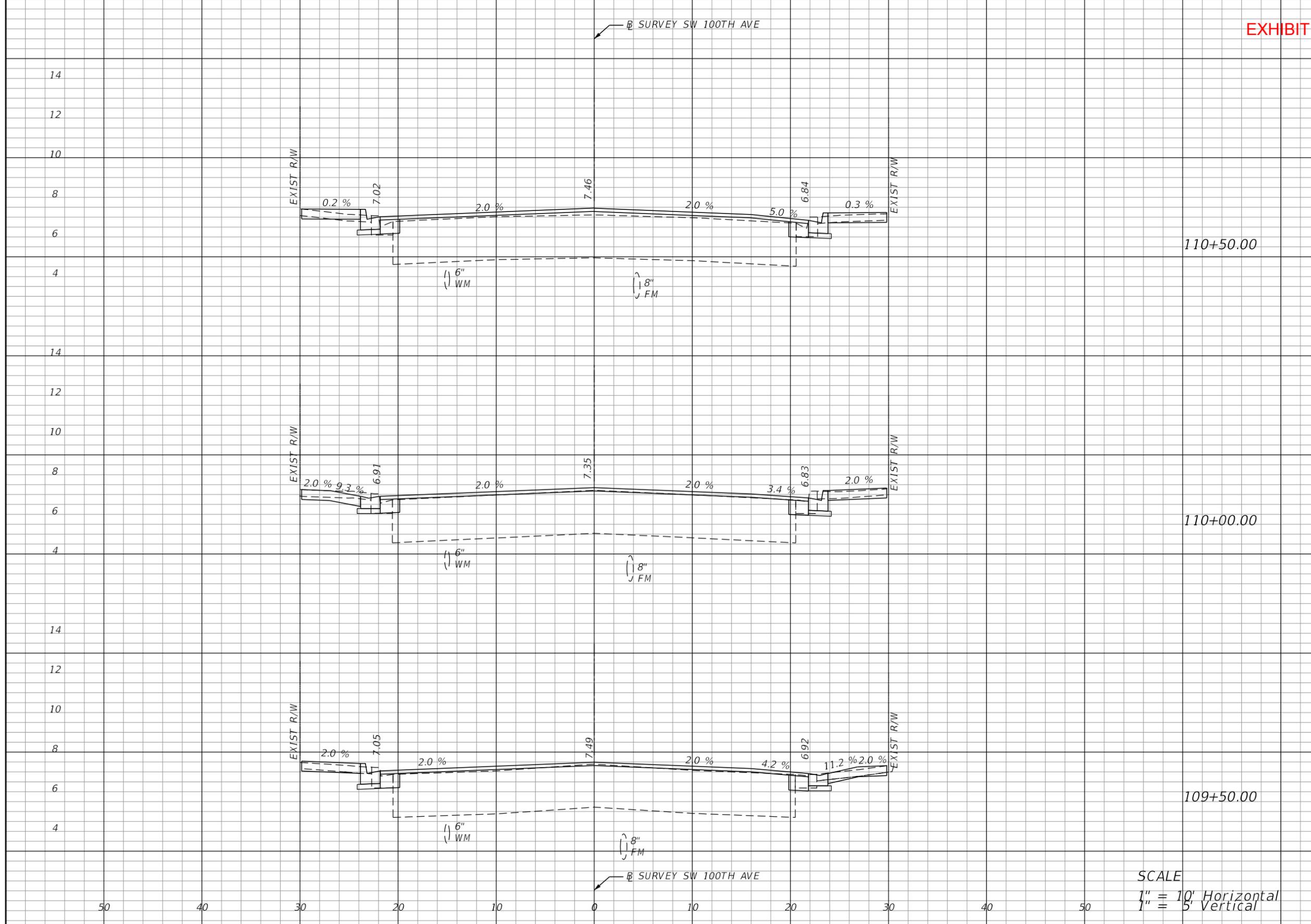
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 Page 236 of 253

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
34



Station	Regular Exc.	Embankment
110+50.00	6.8	0.7
110+00.00	10.1	0.1
109+50.00	7.9	0.0
	15.6	0.7
	16.7	0.1
	19.7	2.2

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

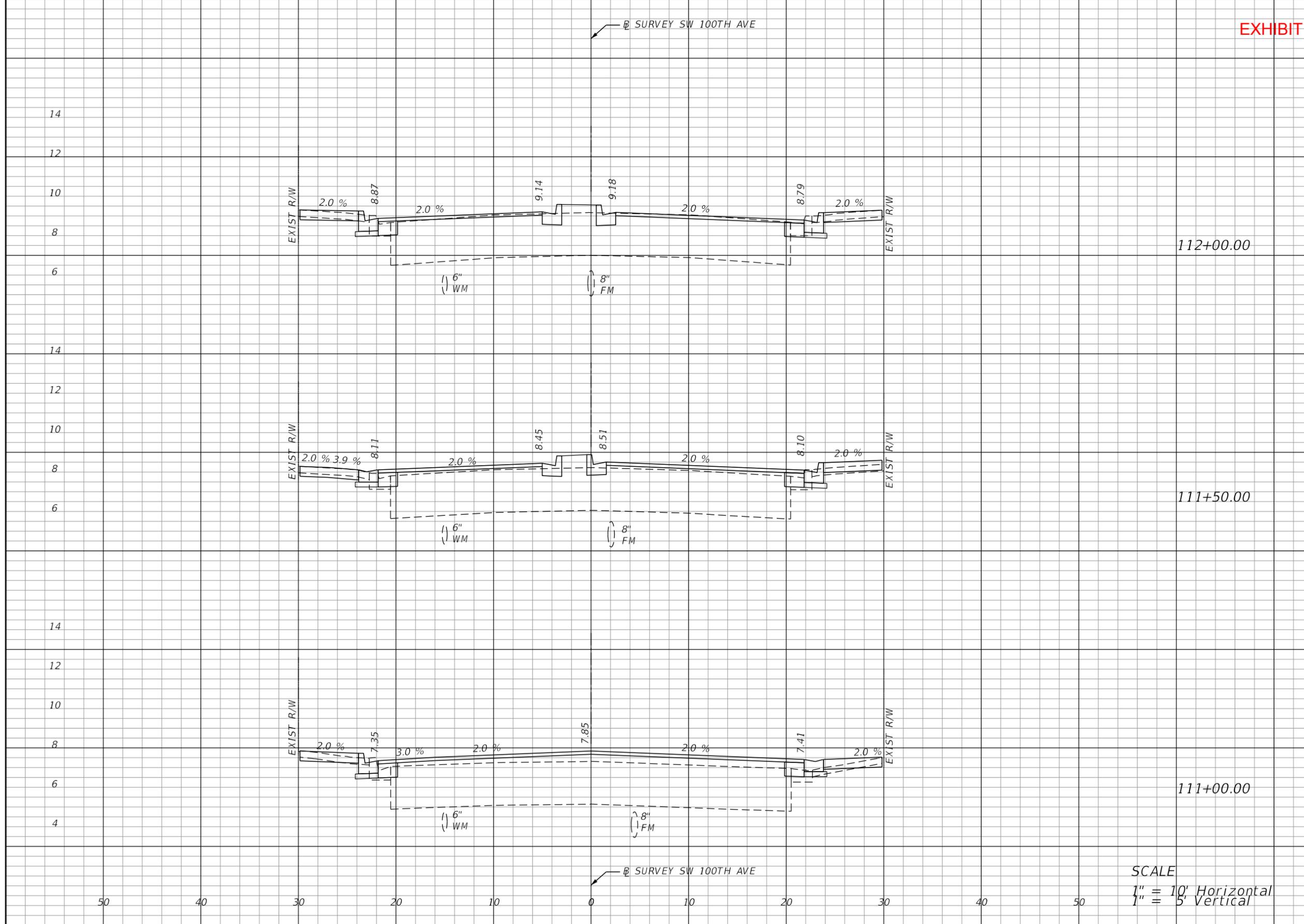
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Cutler Bay
 TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
 35



13.3	20.7	3.0	7.8
9.1	12.6	5.4	7.4
4.5	10.5	2.6	3.1

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

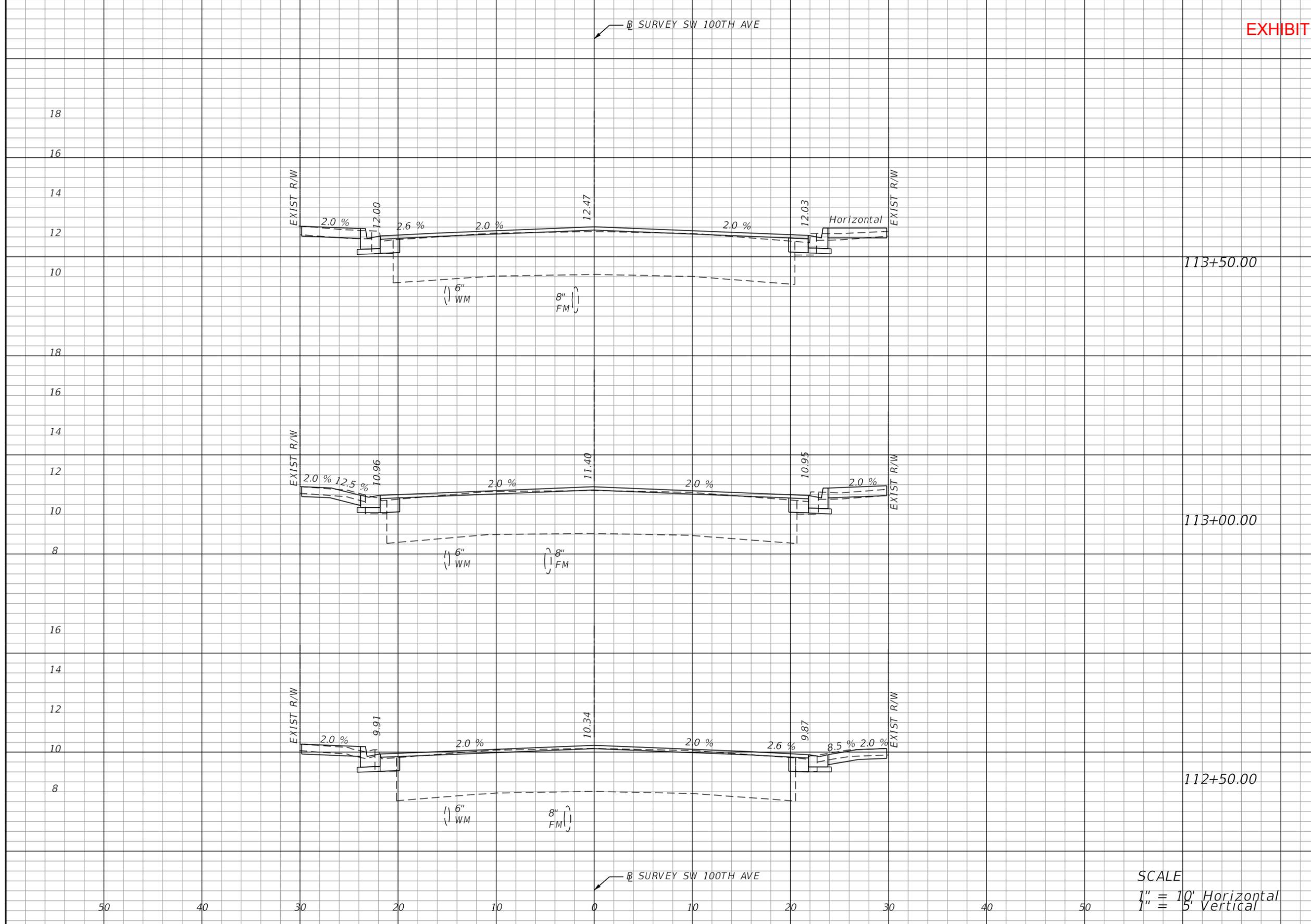
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
36



5.7	11.9	1.1	2.0
7.1	14.7	1.1	1.1
8.8	20.5	0.1	2.9

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

REVISIONS		
DATE	DESCRIPTION	DATE

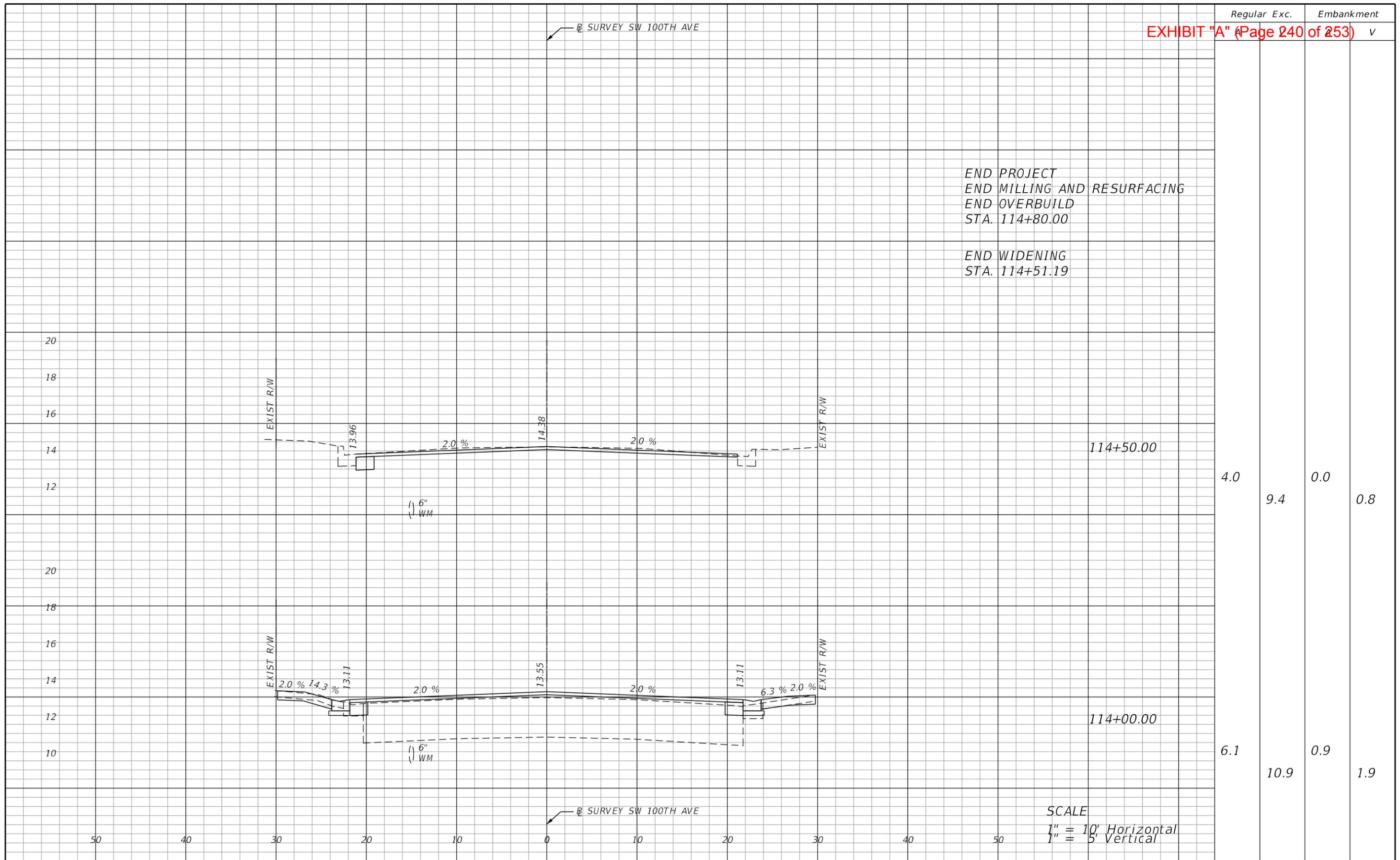
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
 37



END PROJECT
 END MILLING AND RESURFACING
 END OVERBUILD
 STA. 114+80.00

END WIDENING
 STA. 114+51.19

SCALE
 1" = 10' Horizontal
 1" = 5' Vertical

4.0	9.4	0.0	0.8
6.1	10.9	0.9	1.9

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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

CROSS SECTIONS

SHEET NO.
38

TRAFFIC CONTROL PLAN GENERAL NOTES

1. TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE CURRENT EDITION OF THE FLORIDA DOT DESIGN STANDARDS (600 SERIES), THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009 EDITION).
2. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ALL POTHoles THAT DEVELOP WITHIN THE PROJECT LIMITS AND WILL MAINTAIN A SUPPLY OF COLD MIX ON THE PROJECT SITE TO EXPEDITE THOSE REPAIRS. COST OF REPAIR TO BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC. THE TRAFFIC AND TRAVEL WAYS SHALL NOT BE ALTERED BY THE CONTRACTOR TO CREATE A WORK ZONE UNTIL ALL LABOR AND MATERIAL ARE AVAILABLE FOR THE CONSTRUCTION IN THAT AREA.
3. NOTIFICATION OF LANE CLOSURES OR TEMPORARY DETOURS SHALL BE ACCOMPLISHED 14 WORKING DAYS PRIOR TO CLOSURE, DETOUR OR MOT PHASE CHANGE BY SUBMITTING THE REQUIRED LANE CLOSURE FORM, SKETCHES, CALCULATIONS, AND OTHER DATA THROUGH THE ENGINEER TO THE DISTRICT TRAFFIC OPERATIONS OFFICE.
4. AT THE DISCRETION OF THE ENGINEER, IF A LANE CLOSURE CAUSES EXTENDED CONGESTION OR DELAY, THE CONTRACTOR SHALL BE DIRECTED TO REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME THAT THE TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL. ALL WORK SHALL BE PERFORMED DURING DAYTIME ONLY 8:00 AM TO 5:00 PM.
5. LANE CLOSURE SHALL OCCUR ONLY DURING NON-PEAK HOURS ON NON-EVENT DAYS/NIGHTS/WEEKENDS. NON-PEAK HOURS ARE: 8:00 AM TO 5:00 PM WEEKDAYS AND WEEKENDS
6. NO EXISTING LANES SHALL BE CLOSED ON SATURDAY, SUNDAY, OR ANY HOLIDAY. NO EXISTING LANES SHALL BE CLOSED ON A FRIDAY PRECEDING A SATURDAY HOLIDAY OR THE MONDAY FOLLOWING A SUNDAY HOLIDAY. NO EXISTING LANE SHALL BE CLOSED DURING KEYS SPECIAL EVENT DATES AS DETERMINED BY THE ENGINEER. THE ENGINEER MAY ADJUST LANE CLOSURE TIMES IF CONDITIONS WARRANT.
7. REGULATORY SPEED ESTABLISHED WITHIN WORK ZONE TRAVEL WAYS SHALL BE 30 M.P.H./35 M.P.H. REDUCED SPEED AND REGULATORY SPEED SIGNS SHALL BE INSTALLED ON SEPARATE POSTS IN ACCORDANCE WITH THE STANDARD INDEXES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF STORM WATER FROM ROADWAYS UTILIZED FOR MAINTAINING TRAFFIC IN A MANNER APPROVED BY THE ENGINEER. COST FOR REMOVING THE WATER SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
9. AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL COVER WORK ZONE SIGNS WHEN CONDITIONS NO LONGER WARRANT THEIR USE. COST OF COVERING AND UNCOVERING THE SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
10. CONTRACTOR SHALL REMOVE, RELOCATE OR COVER ANY EXISTING OR PROPOSED SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS. WHEN THE CONFLICT NO LONGER EXISTS, THE CONTRACTOR SHALL RESTORE THE SIGNS TO THEIR ORIGINAL POSITION. COST OF TEMPORARILY REMOVING, RELOCATING, COVERING AND RESTORING THE SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
11. EACH EXISTING STREET NAME AND STOP SIGN AFFECTED BY CONSTRUCTION SHALL BE RELOCATED AND MAINTAINED IN AN APPROPRIATE LOCATION FOR THE DURATION OF THE PROJECT. WHEN NO LONGER AFFECTED BY CONSTRUCTION, THESE SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION. COST OF TEMPORARILY RELOCATING AND RESTORING THE SIGNS SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

DROP OFFS:

12. FOR DROP OFFS, THE CONTRACTOR'S ATTENTION IS DIRECTED TO STANDARD INDEX NO. 600, SHEET 10 OF 13. THE CONTRACTOR SHALL USE SHOULDER TREATMENT DETAIL WHEN NO BARRIERS ARE REQUIRED IN THE PLANS.

MARKINGS:

13. COST OF REMOVAL OF WORK ZONE PAVEMENT MARKINGS (INCLUDING PAINT, REMOVABLE TAPE AND MARKERS), REGARDLESS OF METHOD, TO BE INCLUDED IN MAINTENANCE OF TRAFFIC, LS. COST OF REMOVAL OF PAVEMENT MARKINGS AND MARKERS, EXISTING PRIOR TO CONSTRUCTION, TO BE INCLUDED IN MAINTENANCE OF TRAFFIC, LS. USE OF BLACK PAINT TO COVER EXISTING AND/OR TEMPORARY PAVEMENT MARKINGS IS PROHIBITED. GRINDING OR MILLING SHALL ONLY BE PERMITTED IN NON-TRAFFIC AREAS.
14. ALL TEMPORARY STRIPES AND MARKINGS SHALL BE PAINT ONLY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
15. TEMPORARY RAISED PAVEMENT MARKERS (RPMS) SHALL BE INSTALLED ON THE EDGE, CENTER, AND LANE LINES OF ALL CROSSOVERS, TRANSITIONS, AND TANGENT SECTIONS WITHIN THE WORK ZONE WHERE THE VEHICLE PATHS ARE ALTERED. THE SPACING FOR THESE RPMS SHALL BE 40 FT ON CENTERS FOR TANGENT SECTIONS AND 5 FT FOR TRANSITIONS, CURVES, AND CROSSOVERS. THE RPMS SHALL EXTEND 100 FT ON THE TANGENT SECTION BEYOND EACH END OF THESE CROSSOVERS OR TRANSITION AREAS.

PEDESTRIANS, BICYCLES, AND WHEELCHAIRS:

17. AT THE END OF EACH WORK DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE, ANY DROP OFF GREATER THAN 1/4 IN ADJACENT TO THE PEDESTRIAN, BICYCLE, AND WHEELCHAIR TRAVEL PATHS SHALL BE BACKFILLED FLUSH WITH THE SAID PATHS OR PROTECTED WITH TEMPORARY FENCE, CONCRETE BARRIER WALL OR APPROVED HANDRAIL. COST SHALL BE INCLUDED IN PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
18. CONSTRUCTION ACTIVITIES THAT INVOLVE SIDEWALKS ON BOTH SIDES OF THE STREET ARE NOT ALLOWED UNLESS APPROVED BY THE ENGINEER.

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DATE	DESCRIPTION	DATE					39

PHASE I

1. PLACE ALL TRAFFIC CONTROL DEVICES, TEMPORARY SIGNS AND TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT STANDARD INDEX 613 ON BROAD CHANNEL DRIVE AND ON SW 186 ST.
2. CONSTRUCT RAMP AND MEDIAN CROSSING AT THE SW QUADRANT AND RAMP AT THE NE QUADRANT OF THE INTERSECTION OF BROAD CHANNEL DR. AND SW 100 AVE.
3. THE CONTRACTOR IS LIMITED TO WORK ON ONE QUADRANT AT A TIME AND WILL NOT COMMENCE WORK ON THE OTHER QUADRANT UNTIL ALL WORK IS FINILIZED.
3. PLACE ALL TRAFFIC CONTROL DEVICES AND TEMPORARY MARKINGS FOR PHASE IIA.
4. OPEN ROAD TO NORMAL TRAFFIC.

PHASE IIA

1. PLACE ALL TRAFFIC CONTROL DEVICES, TEMPORARY SIGNS AND TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT STANDARD INDEX 613 AND PHASE IIB TYPICAL SECTION ON SW 100 AVE.
2. CONSTRUCT WIDENING, OVERBUILD, CURB AND GUTTER, SIDEWALKS, DROP CURBS, DRAINAGE, PROPOSED DRIVEWAYS ON THE EAST SIDE OF SW 100 AVE.
3. THE CONTRACTOR IS LIMITED TO CONSTRUCT TWO (2) DRIVEWAYS AT A TIME TO MAINTAIN PEDESTRIAN TRAFFIC.
4. ADJUST AND OR RELOCATE UTILITIES TOPS.
5. PLACE SIGNS AT THE LOCATION SHOWN IN THE FINAL SIGNING AND PAVEMENT MARKINGS PLANS.
6. PLACE ALL TRAFFIC CONTROL DEVICES AND TEMPORARY MARKING FOR PHASE IIB.

PHASE IIB

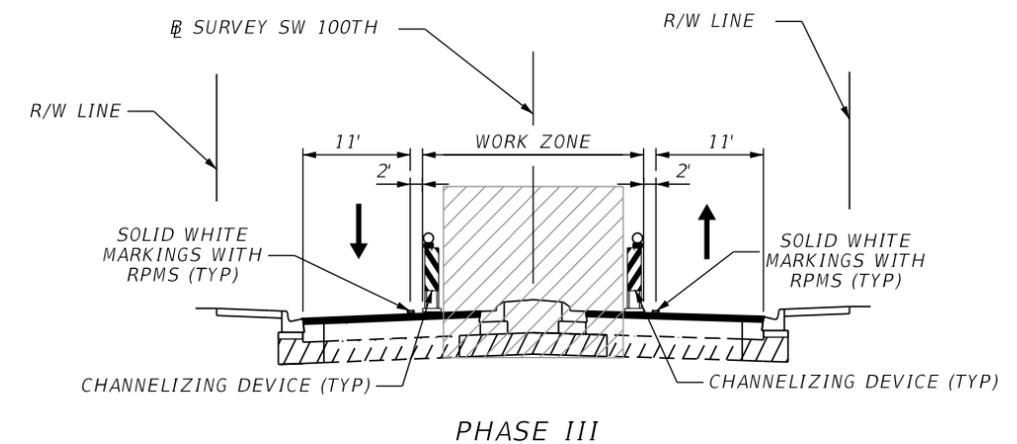
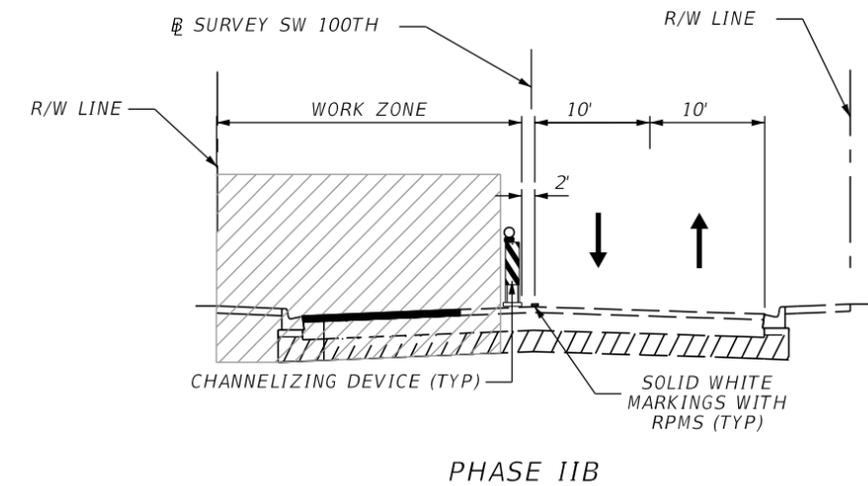
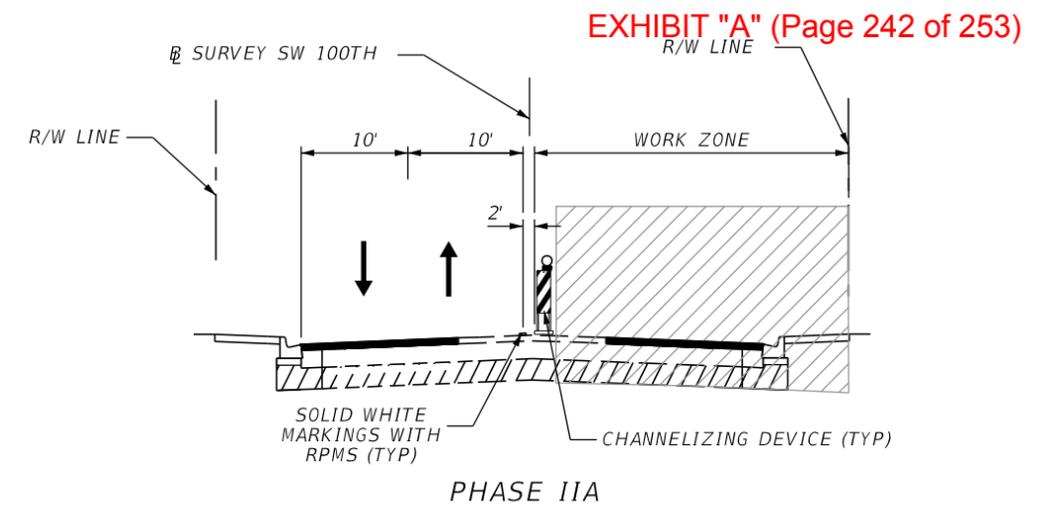
1. PLACE ALL TRAFFIC CONTROL DEVICES, TEMPORARY SIGNS AND TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT STANDARD INDEX 613 AND PHASE IIB TYPICAL SECTION ON SW 100 AVE.
2. CONSTRUCT WIDENING, OVERBUILD, CURB AND GUTTER, SIDEWALKS, DROP CURBS, DRAINAGE, PROPOSED DRIVEWAYS ON THE WEST SIDE OF SW 100 AVE.
3. THE CONTRACTOR IS LIMITED TO CONSTRUCT TWO (2) DRIVEWAYS AT A TIME TO MAINTAIN PEDESTRIAN TRAFFIC.
4. ADJUST AND OR RELOCATE UTILITIES TOPS.
5. PLACE SIGNS AT THE LOCATION SHOWN IN THE FINAL SIGNING AND PAVEMENT MARKINGS PLANS.
6. PLACE ALL TRAFFIC CONTROL DEVICES AND TEMPORARY MARKING FOR PHASE III.

PHASE III

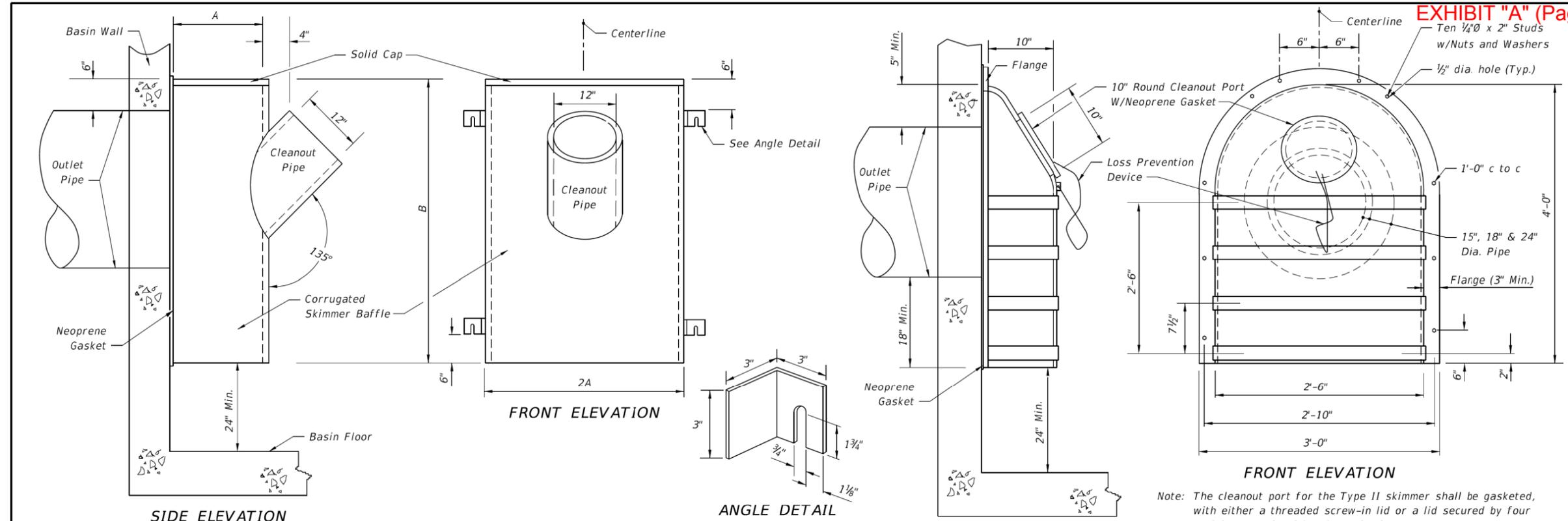
1. PLACE ALL TRAFFIC CONTROL DEVICES, TEMPORARY SIGNS AND TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT STANDARD INDEX 613 AND PAHSE III TYPICAL SECTION ON SW 100 AVE.
2. CONSTRUCT THE RAISED MEDIANS, AND SOD AT THE LOCATIONS SHOWN ON THE ROADWAY PLANS, CONSTRUCT OVERBUILD, ADJUST UTILITES VALVES, RELOCATE VALVE AND ADJUST MANHOLES.
3. PLACE REQUIRED TEMPORARY MARKINGS TO MATCH THE FINAL PAVEMENT MARKINGS (EXCLUDING PROPOSED PARKING AREAS) AS SHOWN IN THE SIGNING AND PAVEMENT MARKING PLANS.

PHASE IV

1. PLACE ALL TRAFFIC CONTROL DEVICES, TEMPORARY SIGNS AND TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH FDOT STANDARD INDEX 603 AND 613 ON SW 100 AVE.
2. RESURFACE AS REQUIRED TO PLACE THE FINAL COURSE.
3. PLACE ALL PROPOSED SIGNS WITH THE EXEMPTIONS OF THE SIGNS ALREADY PLACED DURING PREVIOUS PHASES.
4. PROVIDE FINAL THERMOPLASTIC PAVEMENT MARKINGS.



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DATE	DESCRIPTION	DATE			
				TOWN OF CUTLER BAY SW 100TH AVENUE FROM BROAD CHANNEL DR TO SW 100TH ST/CHAIL ROOST DR MIAMI-DADE, FLORIDA	TRAFFIC CONTROL PLAN



TYPE I SKIMMER

TYPE II SKIMMER

GENERAL NOTES

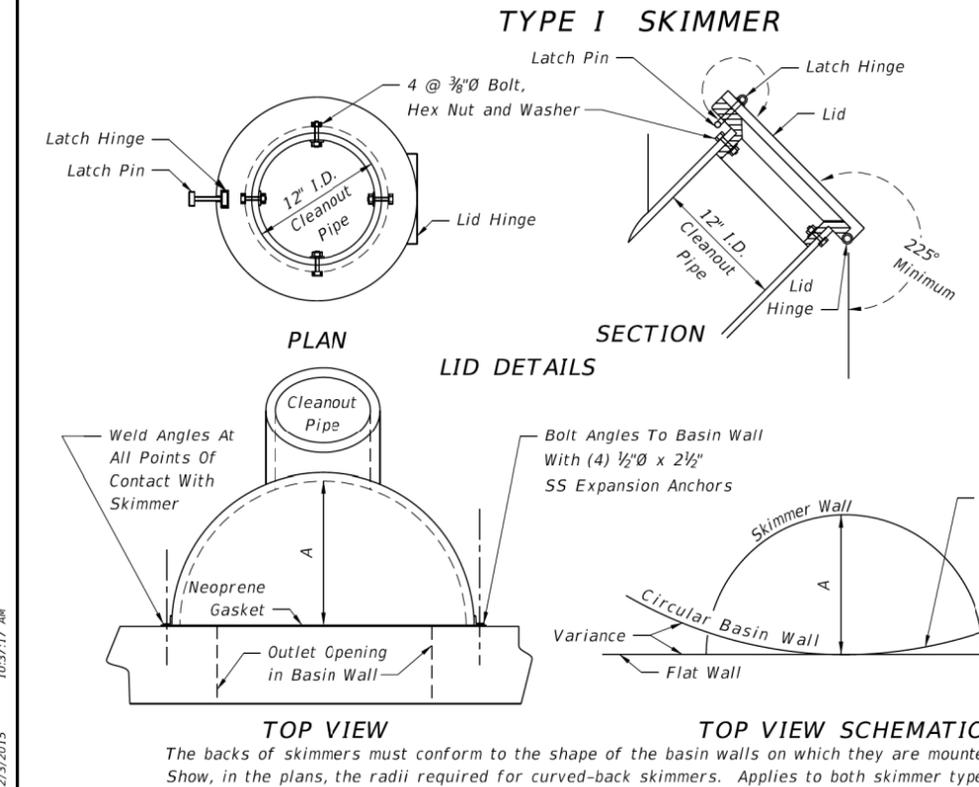
1. The Frenchdrain Skimmer is a hooded cover, mounted over an outlet in a catchbasin, that prevents oil and floating debris from exiting the basin. Use this skimmer in Frenchdrain Catchbasins and in other locations where there is a need to prevent oil, debris or other floating contaminants from exiting Catchbasins through outlet pipes.
2. Place neoprene gasket material between the skimmer and the catchbasin at all points of contact. Trim the gasket neatly to extend 1/2 inch beyond the joint on all sides.
3. Skimmer baffle, cleanout pipe and angles shall be primarily constructed of either galvanized steel, aluminum, polyvinyl chloride, polyethylene, fiberglass or acrylonitrile butadiene styrene. All steel components, other than stainless, shall be hot-dip galvanized.
4. Mounting hardware, hinges and latches shall all be stainless steel. Loss prevention device shall be either stainless steel chain or riveted nylon strap.
5. Material used in construction of skimmer bodies (baffles) and cleanout pipe shall comply with Standard Specification 943 for steel, 945 for aluminum or 948 for plastics.
6. All costs for furnishing and installing a frenchdrain skimmer shall be included in the cost of the basin in which it is installed. Retrofit skimmers shall be paid for as 'modify existing structure'.
7. Plastic Skimmers shall contain a minimum of 1.5% by weight of carbon black for UV protection.

TYPE I SKIMMER DIMENSION TABLE

OUTLET PIPE	A	B
18"	12"	42"
24"	15"	48"
30"	18"	54"
36"	21"	60"

DESIGN NOTES

1. The contractor may submit an alternative design prefabricated Frenchdrain Skimmer for approval by the Engineer.
2. Show, in the plans, the location of the basin and indicate the interior side(s) of the basin on which a skimmer will be installed.
3. Type I Skimmer dimensions shall be based on the outlet pipe diameter as shown in the dimension table.
4. Type II Skimmers are to be used only with outlet pipe diameters of 15", 18", and 24".



LAST REVISION	07/01/04
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DESCRIPTION:

FDOT FY 2016-17 DESIGN STANDARDS

SKIMMERS FOR FRENCHDRAIN OUTLETS

INDEX NO. 241

SHEET NO. 1 of 1

FDOT STANDARDS FOR REFERENCE PURPOSE ONLY

DATE	REVISIONS DESCRIPTION	DATE

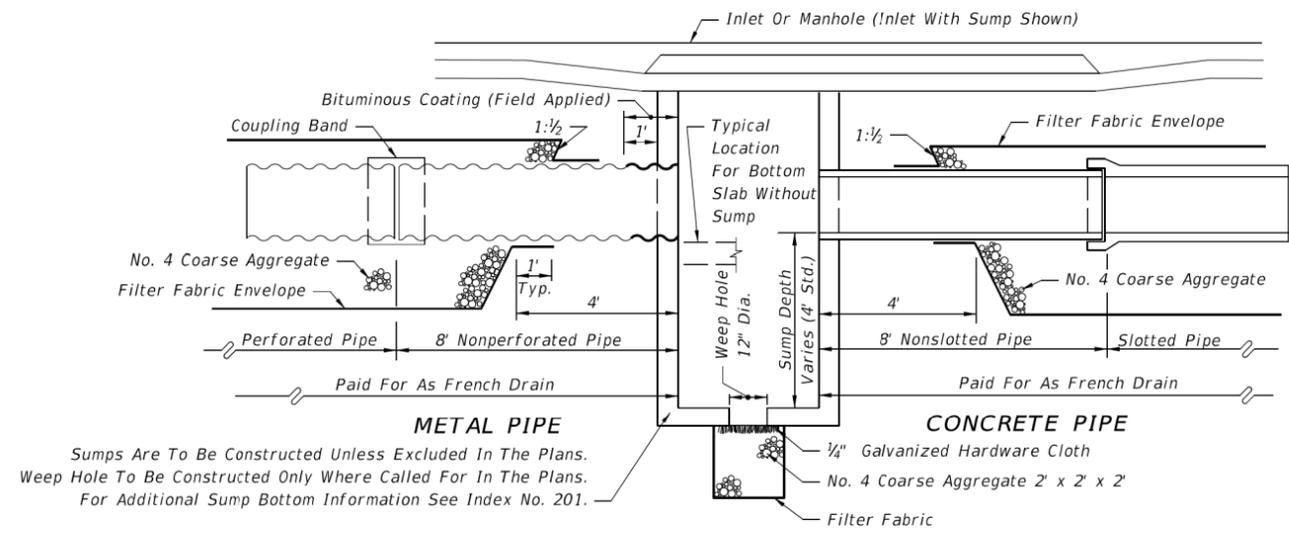
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 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33324
 (305) 477-7575 • C.A. No. 6104

TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project
 MIAMI-DADE, FLORIDA

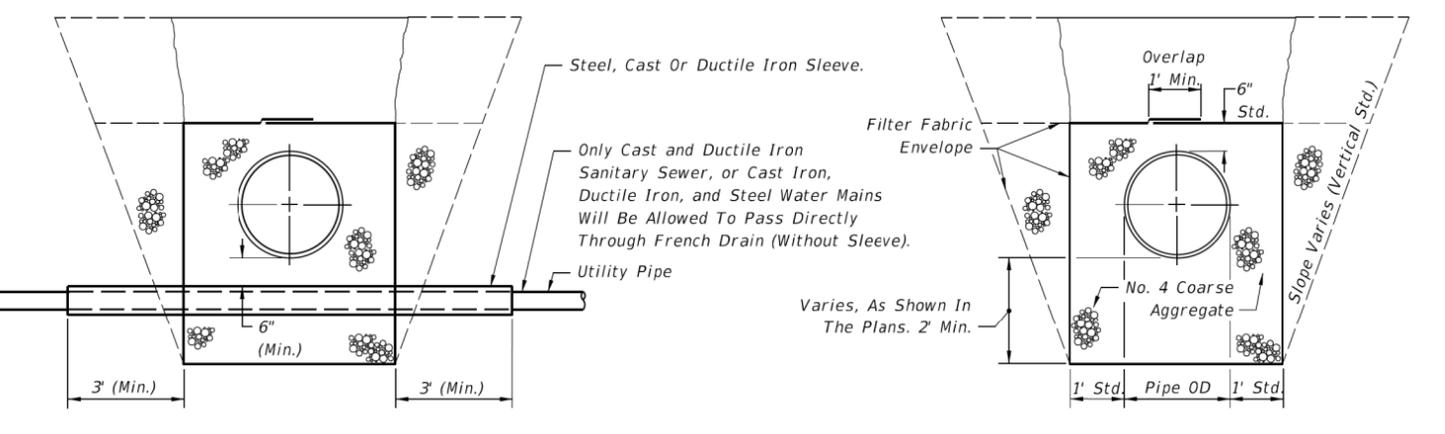
TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO SW 100th St / Nail Roost Dr
 MIAMI-DADE, FLORIDA

DRAINAGE DETAILS

SHEET NO. 41



LONGITUDINAL SECTION



FRENCH DRAIN SYSTEM

GENERAL NOTES

1. Pipe shall be any of the optional types permitted in Section 443 of the Specifications unless otherwise restricted in the plans. Dissimilar types of pipe will not be permitted in a continuous run of pipe.
2. Concrete pipe shall be placed with the slots positioned on sides.
3. Alignment joints are standard (gaskets not required). Recorrugation of metal pipe ends not required.
4. The contractor may submit other methods of providing slots having equal or greater area of opening, for approval by the Engineer.
5. Filter fabric shall be Type D-3 meeting the requirements of Section 985. All filter fabric joints shall lap a minimum of one (1) foot.
6. The standard cross section shall be constructed unless other section(s) described or detailed in the plans.
7. For supplemental details see Index No. 280.
8. The contractor shall take the necessary precautions to prevent contamination of the trench with sand, silt and foreign materials.
9. French drains shall be paid for under the contract unit price for French Drains, LF. The unit price shall include the cost of pipe, pipe plugs, pipe fittings, coarse aggregate and filter fabric in place, and the cost for trench excavation, backfill and compaction. The unit price shall also include the cost for disposal of surplus excavated materials and cost for restoration of pavement removed or damaged by french drain construction, but shall not include payments for items paid for elsewhere.

DESIGN NOTES

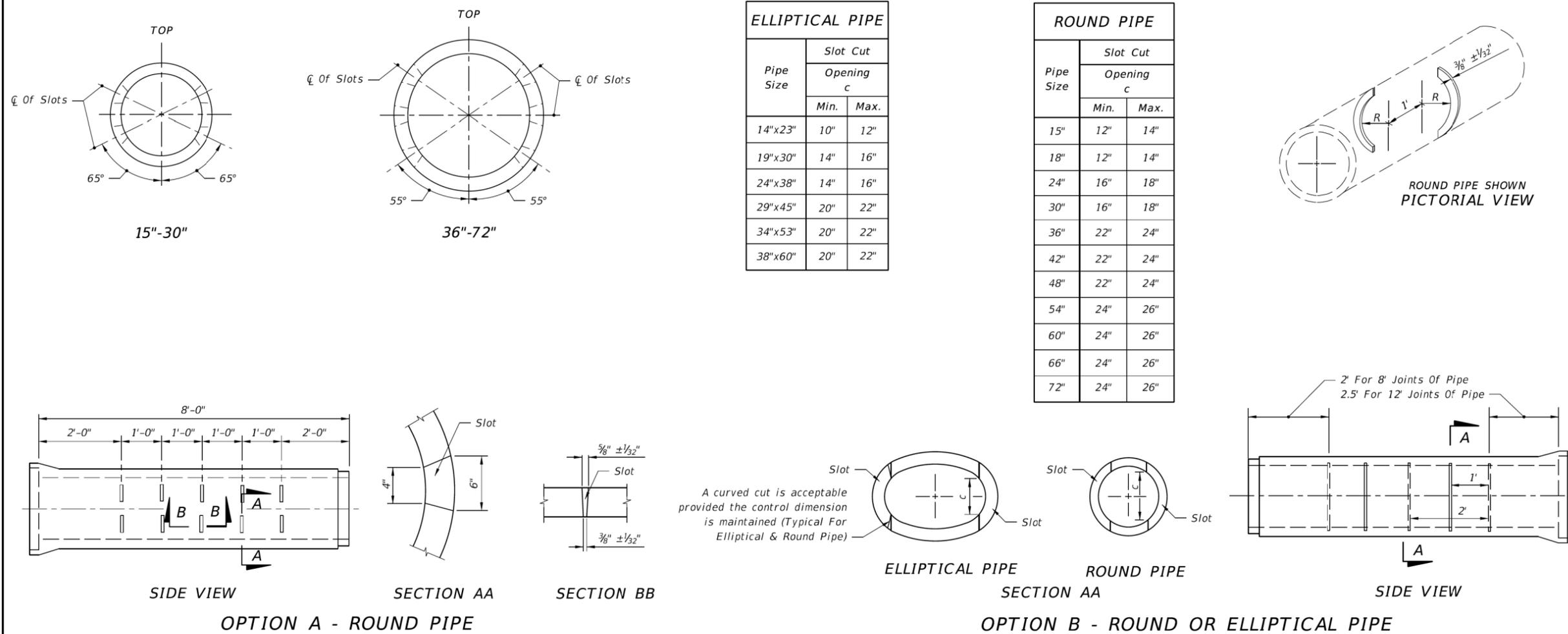
1. Pipe invert should be at or above the water table whenever possible.
2. French drains with minor dimensional changes or otherwise different from the standard cross-section shall be either described or detailed in the plans. French drains with significantly different cross-sections shall be detailed in the plans.

12/3/2015 11:18:17 AM

LAST REVISION 07/01/10	REVISION	DESCRIPTION:	FDOT FY 2016-17 DESIGN STANDARDS	FRENCH DRAIN	INDEX NO. 285	SHEET NO. 1 of 2
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FDOT STANDARDS FOR REFERENCE PURPOSE ONLY

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		DATE	DESCRIPTION	DATE				<p>MARLIN ENGINEERING</p> <p>RAFAEL LAGOS, P.E. • P.E. No.: 51412 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33324 (305) 477-7575 • C.A. No. 6104</p>	<p>TOWN OF CUTLER BAY</p> <p>SW 100th Avenue Stormwater Retrofit Project</p> <p>MIAMI-DADE, FLORIDA</p>	<p>TOWN OF CUTLER BAY</p> <p>SW 100th Avenue FROM BROAD CHANNEL DR TO SW 100th St / Nail Roost Dr MIAMI-DADE, FLORIDA</p>	<p>DRAINAGE DETAILS</p>	<p>SHEET NO. 42</p>
DATE	DESCRIPTION	DATE										



SLOTTED PIPE OPTIONS

LAST REVISION 07/01/07	DESCRIPTION:	 FY 2016-17 DESIGN STANDARDS	FRENCH DRAIN	INDEX NO. 285	SHEET NO. 2 of 2
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FDOT STANDARDS FOR REFERENCE PURPOSE ONLY

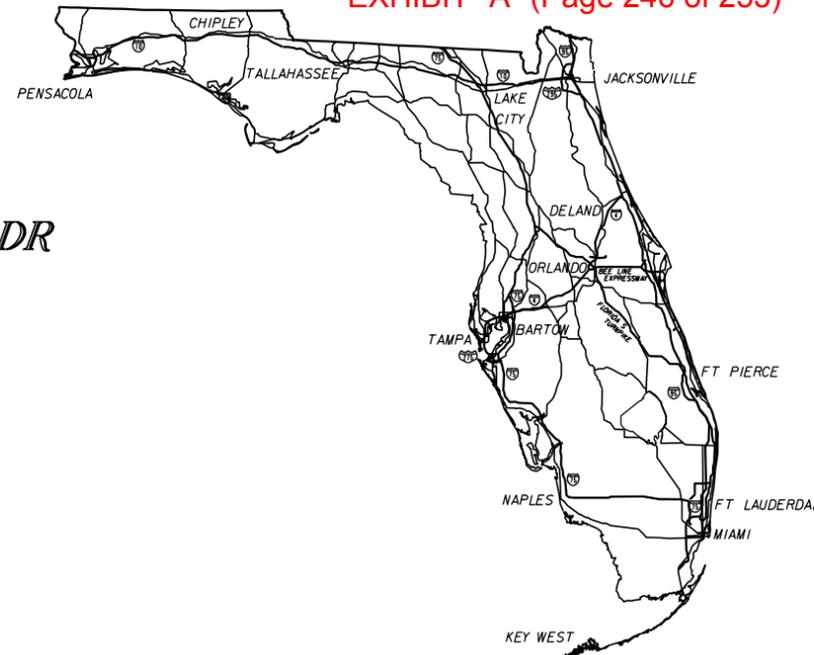
REVISIONS DATE DESCRIPTION DATE		 MARLIN ENGINEERING RAFAEL LAGOS, P.E. • P.E. No.: 51412 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33324 (305) 477-7575 • C.A. No. 6104	 TOWN OF CUTLER BAY SW 100TH AVENUE STORMWATER RETROFIT PROJECT MIAMI-DADE, FLORIDA	TOWN OF CUTLER BAY SW 100TH AVENUE FROM BROAD CHANNEL DR TO SW 100TH ST/ NAIL ROOST DR MIAMI-DADE, FLORIDA	SHEET NO. 43
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12/3/2015 11:18:18 AM

CONTRACT PLANS

PROJECT ITB NO. 12-34

SW 100TH AVENUE IMPROVEMENTS
FROM BROAD CHANNEL DR TO SW 186TH ST/QUAIL ROOST DR
TOWN OF CUTLER BAY
MIAMI-DADE COUNTY



INDEX OF SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.	SHEET DESCRIPTION
S-1	KEY SHEET
S-2	TABULATION OF QUANTITIES
S-3	SIGNING AND PAVEMENT MARKINGS PROJECT NOTES
S-4 - S-8	SIGNING AND PAVEMENT MARKING PLAN



SIGNING AND PAVEMENT MARKING PLANS

ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

RAFAEL A. LAGOS, P.E.
P.E. LICENSE NUMBER 51412
MARLIN ENGINEERING, INC.
1700 NW 66TH AVE - SUITE 106
PLANTATION, FL 33313

PLANS PREPARED BY:



RAFAEL LAGOS, P.E. • P.E. No.: 51412
1700 NW 66 Ave., Ste. 106 • Plantation, FL 33313
(305) 477-7575 • C.A. No. 6104

VENDOR NO. 65-0279601
C.A. NO. 6104

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

SIGNING AND PAVEMENT
MARKING PLANS
ENGINEER OF RECORD: RAFAEL A. LAGOS, P.E.

P.E. NO.: 51412

TOWN OF CUTLER BAY
ITB # 17-08
SW 100 AVENUE STORMWATER RETROFIT PROJECT
Page 246 of 253

SHEET
NO.

S-1

TABULATION OF QUANTITIES

EXHIBIT "A" (Page 247 of 253)

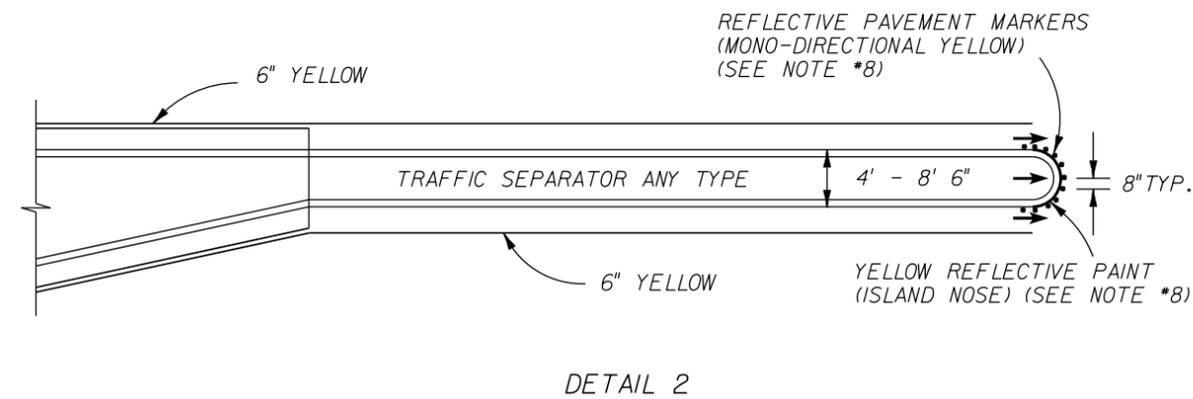
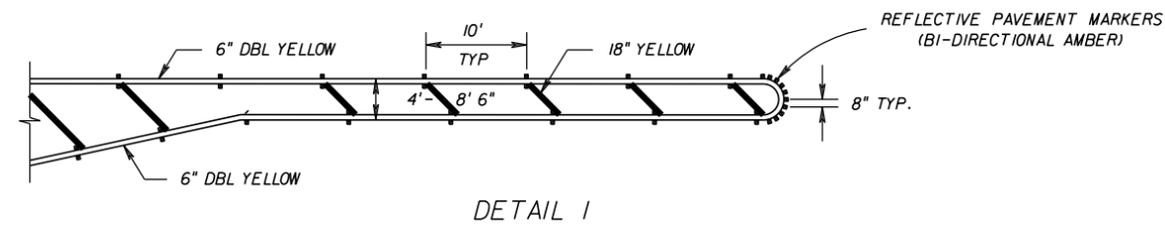
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			S-4		S-5		S-6		S-7		S-8		PLAN	FINAL	PLAN	FINAL		
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
700 1 11	SINGLE POST SIGN, F&I, GROUND MOUNT, <12 SF	AS	14		4		4		6		2					30		30
700 1 60	SINGLE POST SIGN, REMOVE	AS	2								2					4		4
710 90	PAINTED PAVEMENT MARKINGS - FINAL SURFACE	LS																1
*	PAINT, STD., WHITE, SOLID, 6"	GM	0.125		0.138		0.131		0.117		0.041					0.552		0.552
*	PAINT, STD., WHITE, SOLID, 8"	GM	0.030		0.020		0.020		0.025		0.014					0.109		0.109
*	PAINT, STD., WHITE, SOLID, CROSSWALK/RA, 12"	LF	181.6								123.9					305.5		306
*	PAINT, STD., WHITE, SOLID, DIAG./CHEVRON, 18"	LF	75.7		47.0		43.8		62.0		33.0					261.5		262
*	PAINT, WHITE, SOLID, STOP LINES/CROSSWALK, 24"	LF	213.2								28.1					241.3		241
*	PAINT, STD., ARROWS (RIGHT)	EA	1						1		1					3		3
*	PAINT, STD., ARROWS (LEFT)	EA	4		5		4		5		1					19		19
*	PAINT, STD., YELLOW, SOLID, 6"	GM	0.136		0.136		0.129		0.140		0.029					0.570		0.570
*	PAINT, STD., YELLOW, SOLID, DIAG./CHEVRONS, 18"	LF	36.3						28.5							64.8		65
*	PAINT, STD., YELLOW, SKIP, 6" (10/30)	GM	0.064		0.136		0.129		0.092							0.421		0.421
*	RETRO-REFLECTIVE PAVEMENT MARKERS (WHITE/RED)	EA	19		12		10		16		14					71		71
*	RETRO-REFLECTIVE PAVEMENT MARKERS (YELLOW/YELLOW)	EA	68		64		64		66		8					270		270
711 11123	THERMO., STD., WHITE, SOLID, CROSSWALK/RA, 12"	LF	181.6								123.9					305.5		306
711 11124	THERMO., STD., WHITE, SOLID, DIAG./CHEVRONS, 18"	LF	75.7		47.0		43.8		62.0		33.0					261.5		262
711 11125	THERMO., STD., WHITE, SOLID, STOP LINE, 24"	LF	25.8								28.1					53.9		54
711 11170	THERMO., STD., ARROWS (RIGHT)	EA	1						1		1					3		3
711 11170	THERMO., STD., ARROWS (LEFT)	EA	4		5		4		5		1					19		19
711 11224	THERMO., STD., YELLOW, SOLID, DIAG./CHEVRONS, 18"	LF	36.3						28.5							64.8		65
711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	187.4													187.4		187
711 16101	THERMO., STD. - OTHER, WHITE, SOLID, 6"	GM	0.125		0.138		0.131		0.117		0.041					0.552		0.552
711 16102	THERMO., STD. - OTHER, WHITE, SOLID, 8"	GM	0.030		0.020		0.020		0.025		0.014					0.109		0.109
711 16201	THERMO., STD. - OTHER, YELLOW, SOLID, 6"	GM	0.136		0.136		0.129		0.140		0.029					0.570		0.570
711 16231	THERMO., STD. - OTHER, YELLOW, SKIP, 6" (10/30)	GM	0.064		0.136		0.129		0.092							0.421		0.421

* THESE QUANTITIES ARE PAID UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM - ITEM NO. 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION; SEE SPECIFICATION 710 FOR THE NUMBER OF APPLICATIONS REQUIRED.

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		DATE	DESCRIPTION	DATE				 <p>RAFAEL LAGOS, P.E. • P.E. No.: 51412 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33317 (305) 477-7575 • C.A. No. 6104</p>	 <p>TOWN OF CUTLER BAY SW 100th Avenue Stormwater Retrofit Project MIAMI-DADE, FLORIDA</p>	<p>TOWN OF CUTLER BAY SW 100TH AVENUE FROM BROAD CHANNEL DR TO SW 100TH ST @ HAIL ROOST DR MIAMI-DADE, FLORIDA</p>	<p>TABULATION OF QUANTITIES</p>	<p>SHEET NO. S-2</p>
DATE	DESCRIPTION	DATE										

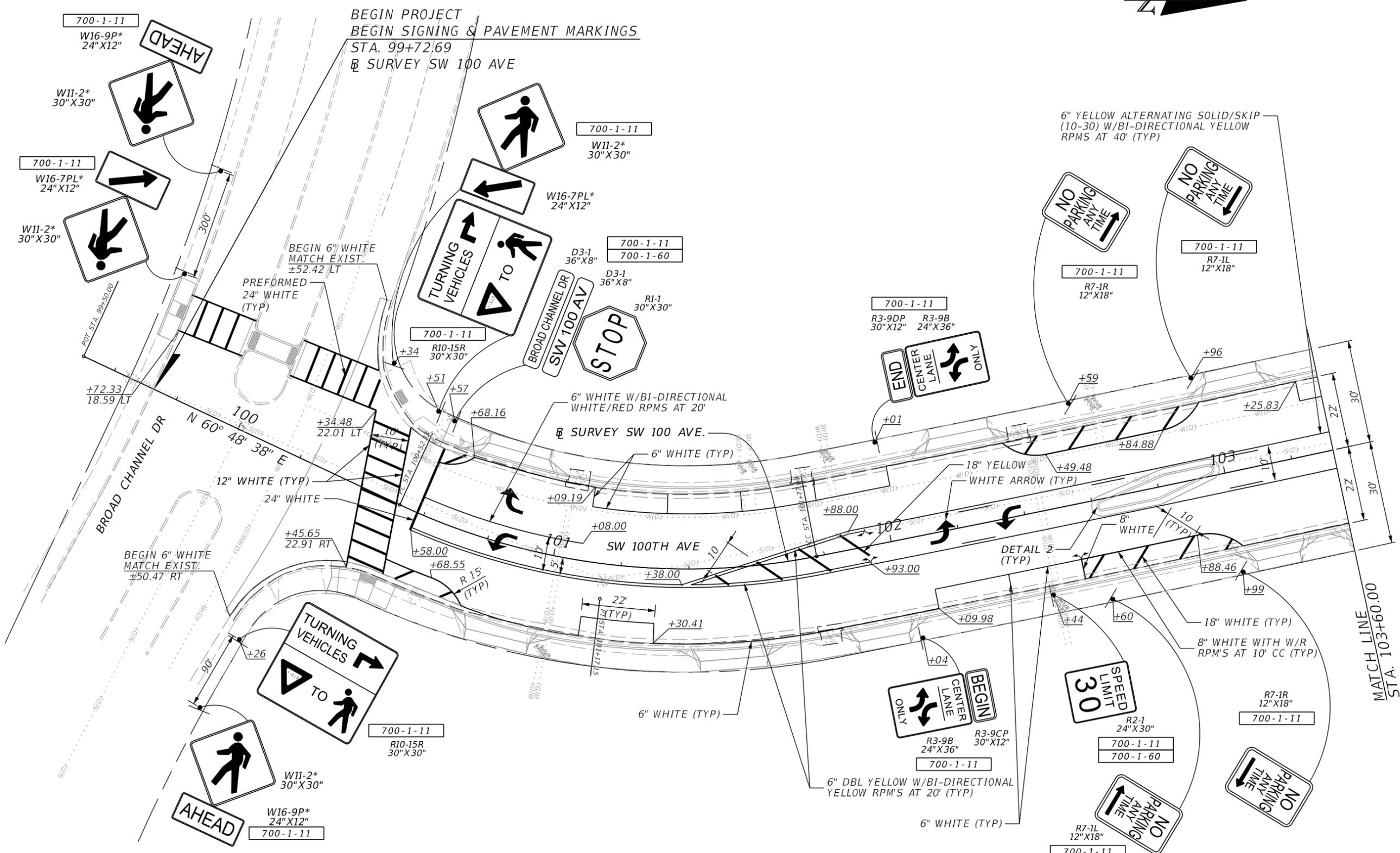
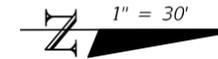
SIGNING & PAVEMENT MARKING NOTES:

1. ALL SIGNING AND PAVEMENT MARKINGS INSTALLED AS PART OF THESE PLANS SHALL CONFORM TO THE CURRENT EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS. ALL SIGN PANELS SHALL BE FABRICATED TO COMPLY WITH THE MOST RECENT EDITION OF THE FEDERAL HIGHWAY AND ADMINISTRATION STANDARD HIGHWAY SIGNS.
2. MATCH EXISTING PAVEMENT MARKINGS AT THE BEGINNING AND THE END OF THE PROJECT AND AT ALL SIDE STREETS WITHOUT JOGS AND OFFSETS.
3. SIGN ASSEMBLY LOCATIONS SHOWN ON PLANS WHICH ARE IN CONFLICT WITH LIGHTING, UTILITIES, DRIVEWAYS, WHEELCHAIR RAMPS, ETC., MAY BE ADJUSTED SLIGHTLY AS DIRECTED BY THE ENGINEER. EXTREME LOCATION CHANGES MUST BE APPROVED BY MIAMI DADE PUBLIC WORKS DEPARTMENT AND TOWN OF CUTLER BAY.
4. INCORRECTLY PLACED (THERMOPLASTIC OR) PAINT MARKINGS OVER FRICTION COURSE WILL BE REMOVED BY MILLING AND REPLACING THE FRICTION COURSE A MINIMUM WIDTH OF 18 IN. AT THE CONTRACTOR'S EXPENSE. THE ENGINEER MAY APPROVE AN ALTERNATIVE METHOD IF IT CAN BE DEMONSTRATED TO COMPLETELY REMOVE THE MARKINGS WITHOUT DAMAGING THE ASPHALT.
5. THE CONTRACTOR SHALL RELOCATE ALL EXISTING POST-MOUNTED STREET NAME AND STOP SIGNS TO A VISIBLE AREA UNDISTURBED BY THE CONSTRUCTION SO AS TO MINIMIZE DAMAGE TO THE SIGNS DURING CONSTRUCTION. THE STREET NAME SHALL BE REATTACHED TO THE TOP OF THE NEW STOP SIGNS ON MINOR SIDE STREETS AT THE END OF CONSTRUCTION. THE NEW STOP SIGN POST SHALL HAVE ADEQUATE LENGTH TO ACCOMMODATE THE EXISTING STREET NAMES AT THE TOP. COST OF RELOCATION AND REATTACHMENT OF STREET NAME SIGN SHALL BE PAID FOR UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
6. EXTRUDED ALUMINUM SIGN SUPPORT CLAMPS ARE NOT ACCEPTABLE. ALL RELOCATED SIGNS MUST COMPLY WITH THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND ROADWAY DESIGN AND TRAFFIC STANDARDS AS IF THEY WERE NEW SIGNS. IF EXISTING CLAMPS, BRACKETS, POLES, ETC. NEED TO BE REPLACED THE COST SHALL BE INCLUDED IN THE RELOCATION PAY ITEMS.
7. THE CONTRACTOR SHALL SUBMIT A LIST OF THE EXISTING SIGNS TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE. ANY LOST OR DAMAGED DURING CONSTRUCTION SIGNS SHALL BE REPLACED AT NO ADDITIONAL COST. COST OF MAINTAINING OF EXISTING SIGNS TO BE INCLUDED IN ITEM 102-1, MAINTENANCE OF TRAFFIC.
8. FURNISH AND INSTALL REFLECTIVE PAINT ON THE FACE OF CURB FOR THE LIMITS SHOWN IN THE ABOVE DETAILS.



TYPICAL PLACEMENT OF REFLECTIVE PAVEMENT MARK

REVISIONS			 RAFAEL LAGOS, P.E. • P.E. No.: 51412 1700 NW 66 Ave., Ste. 106 • Plantation, FL 33317 (305) 477-7575 • C.A. No. 6104	 TOWN OF CUTLER BAY SW 100th Avenue Stormwater Retrofit Project MIAMI-DADE, FLORIDA	TOWN OF CUTLER BAY SW 100TH AVENUE FROM BROAD CHANNEL DR TO SW 100TH ST/MAIL ROOST DR MIAMI-DADE, FLORIDA	SIGNING AND PAVEMENT MARKING PROJECT NOTES	SHEET NO.
DATE	DESCRIPTION	DATE					S-3



NOTE:
 *: FLUORESCENT YELLOW-GREEN BACKGROUND COLOR TO BE USED.

REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
 ENGINEERING

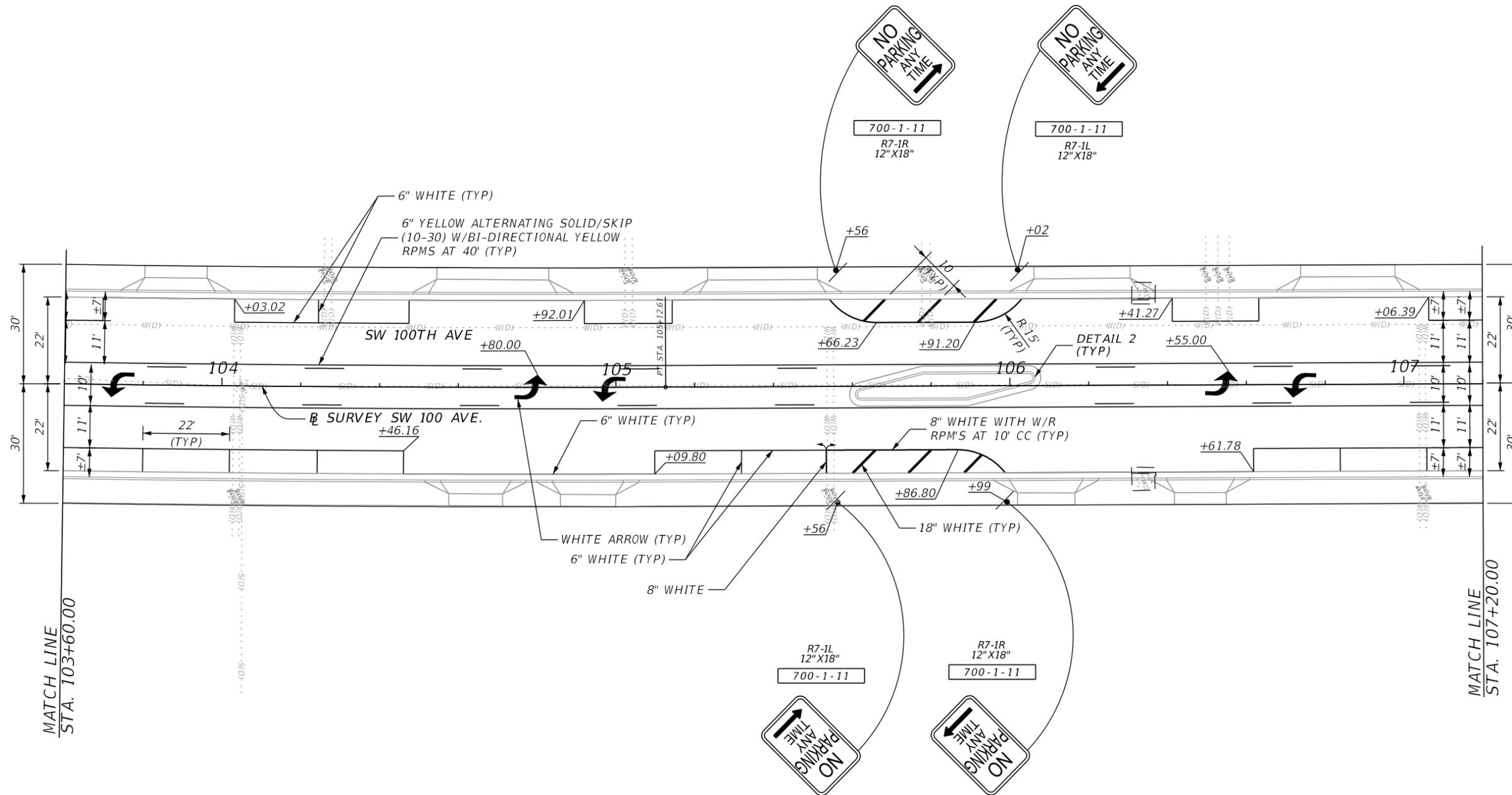
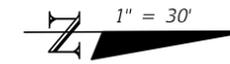
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TOWN OF CUTLER BAY
SW 100TH AVENUE
 FROM BROAD CHANNEL DR TO
 SW 100TH ST/MAIL ROOST DR
 MIAMI-DADE, FLORIDA

**SIGNING AND PAVEMENT
 MARKING PLAN**

SHEET NO.
 S-4



REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

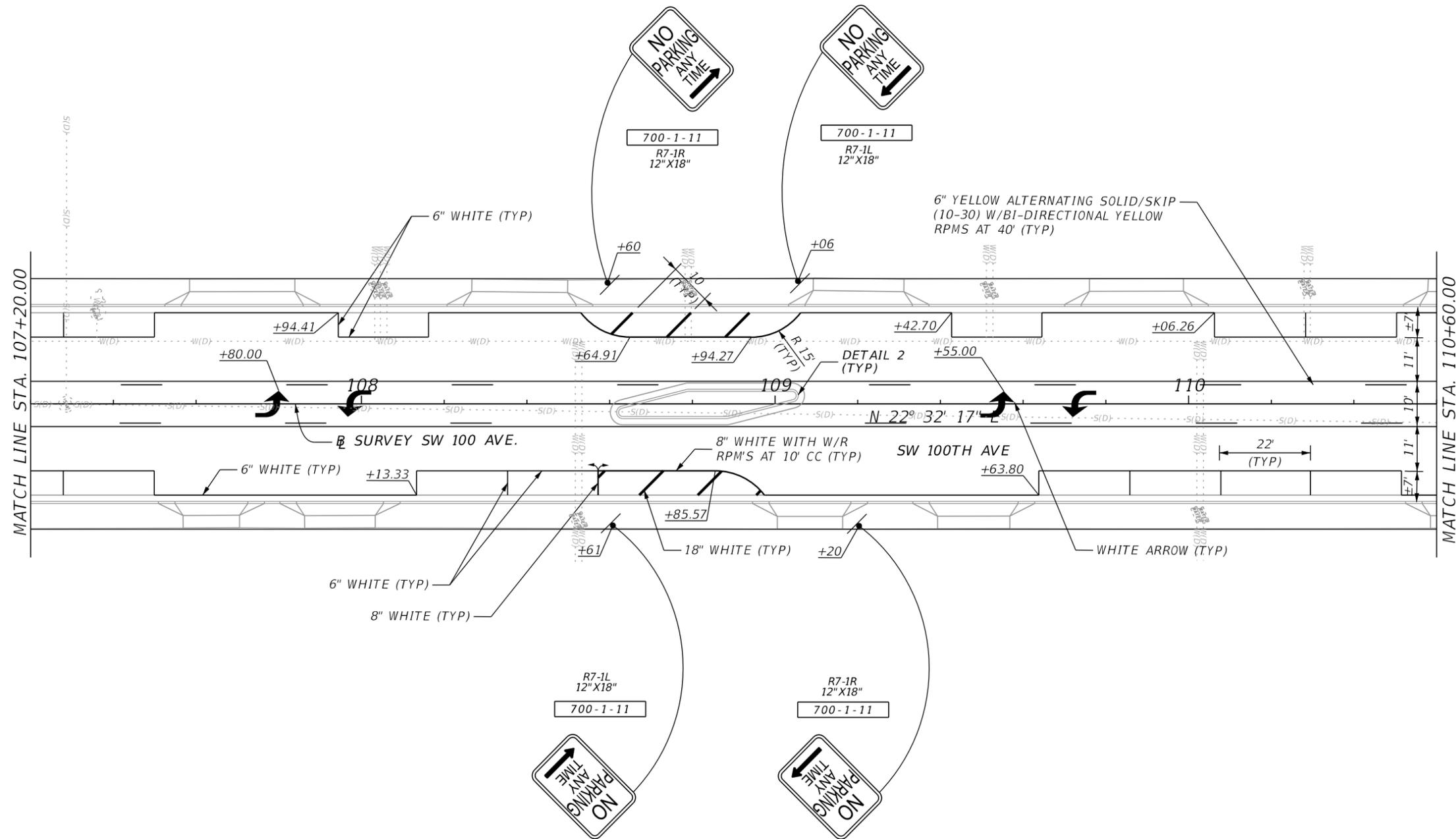
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TOWN OF CUTLER BAY
FLORIDA

TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST/CHAIL ROOST DR
MIAMI-DADE, FLORIDA

**SIGNING AND PAVEMENT
MARKING PLAN**

SHEET NO.
S-5



REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

RAFAEL LAGOS, P.E. • P.E. No.: 51412
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(305) 477-7575 • C.A. No. 6104

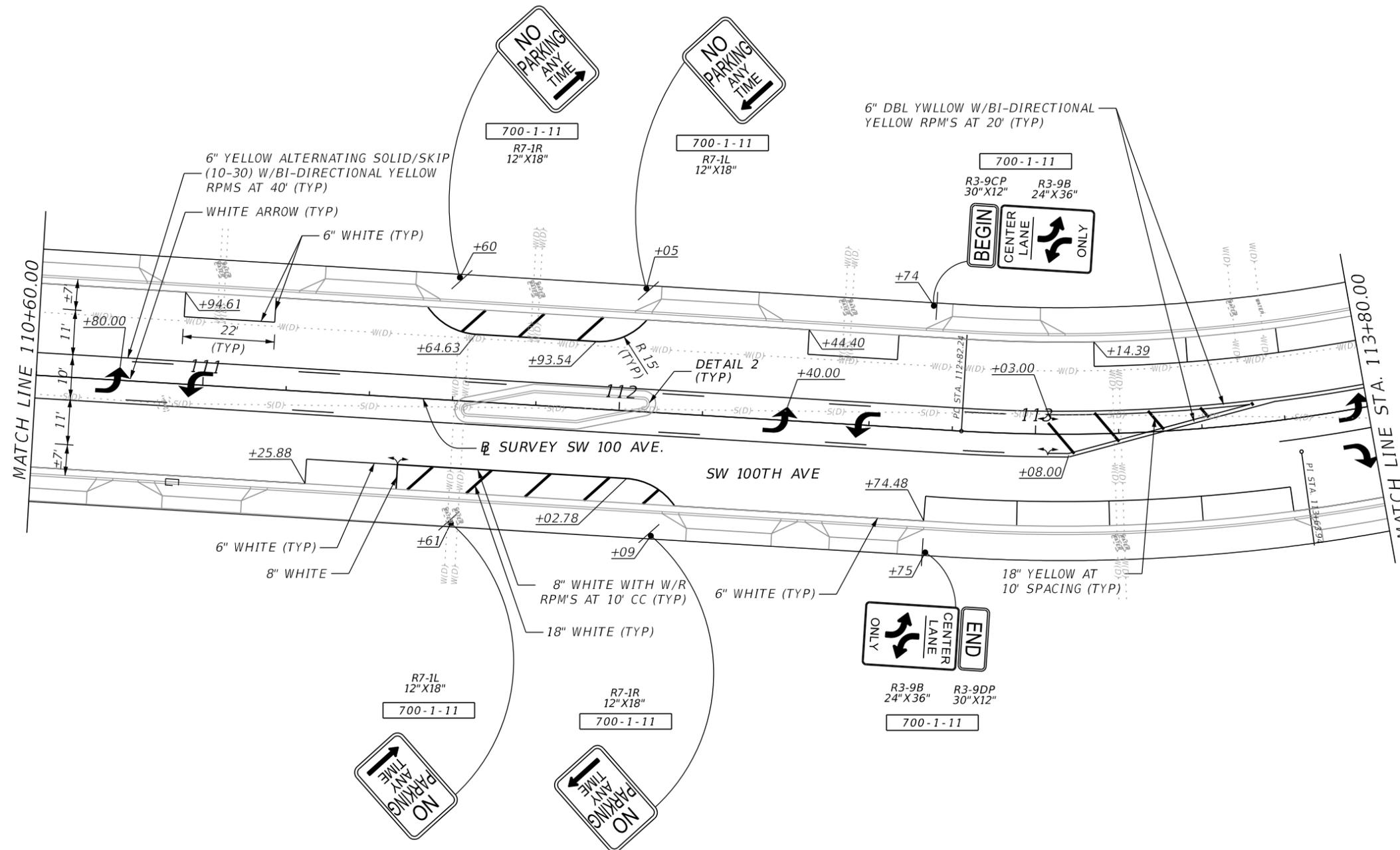
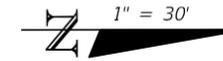


TOWN OF CUTLER BAY
SW 100TH AVENUE
FROM BROAD CHANNEL DR TO
SW 100TH ST @ HAIL ROOST DR
MIAMI-DADE, FLORIDA

SIGNING AND PAVEMENT
MARKING PLAN

SHEET NO.
S-6

CURVE DATA BLO3
 PI STA. = 113+63.94
 Δ = 22° 32' 25" (LT)
 D = 13° 58' 28"
 T = 81.70
 L = 161.29
 R = 410.00
 PC STA. = 112+82.24
 PT STA. = 114+43.53



REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
 ENGINEERING

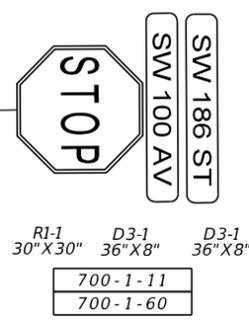
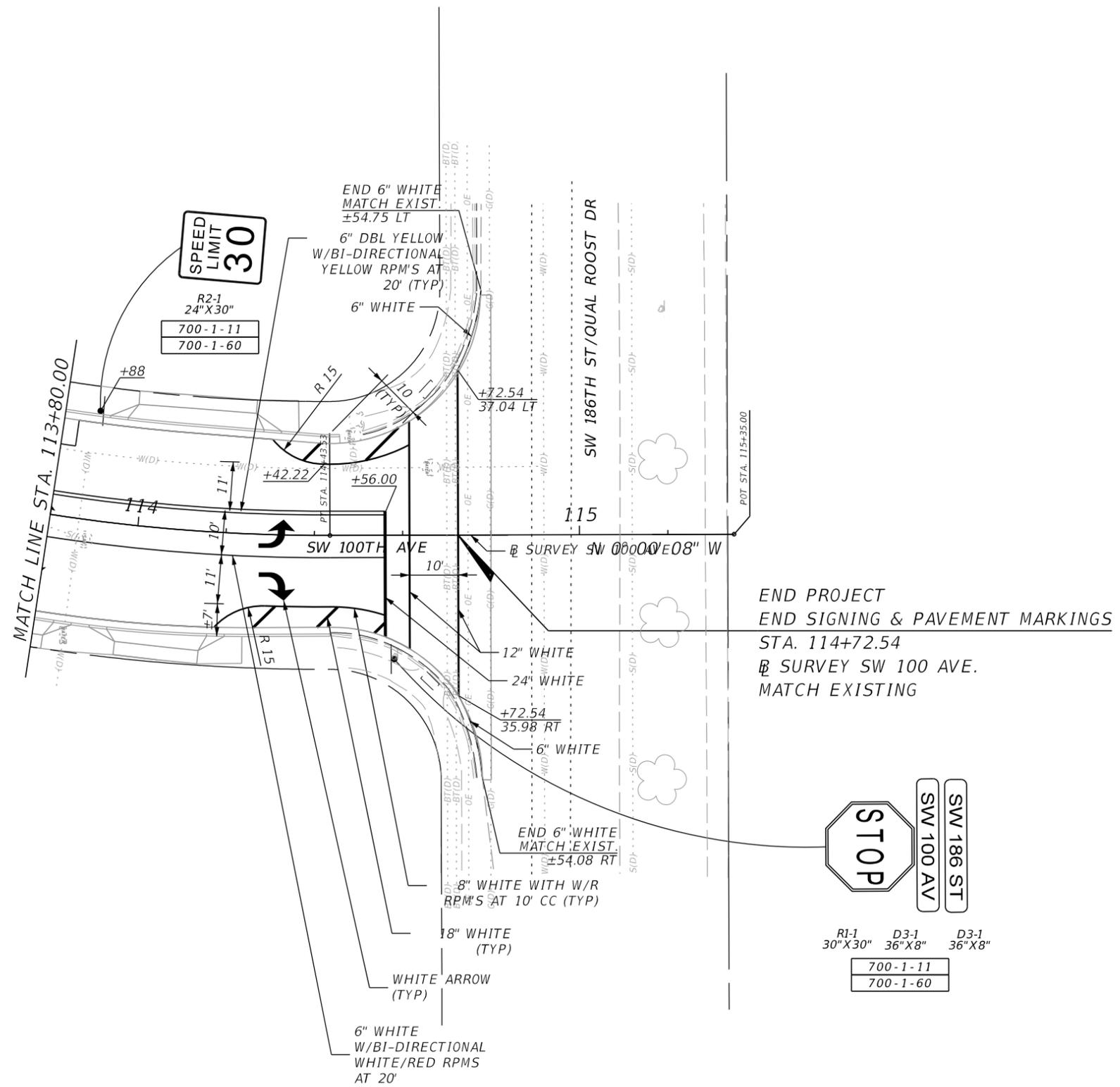
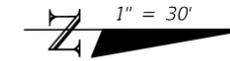
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TOWN OF CUTLER BAY
 SW 100th Avenue Stormwater Retrofit Project

TOWN OF CUTLER BAY
 SW 100th Avenue
 FROM BROAD CHANNEL DR TO
 SW 100th ST @ NAIL ROOST DR
 MIAMI-DADE, FLORIDA

**SIGNING AND PAVEMENT
 MARKING PLAN**

SHEET NO.
S-7



REVISIONS		
DATE	DESCRIPTION	DATE

MARLIN
ENGINEERING

RAFAEL LAGOS, P.E. • P.E. No.: 51412
1700 NW 66 Ave., Ste. 106 • Plantation, FL 33331
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TOWN OF CUTLER BAY
SW 100th Avenue Stormwater Retrofit Project

TOWN OF CUTLER BAY
SW 100th Avenue
FROM BROAD CHANNEL DR TO
SW 101st St / Nail Roost Dr
MIAMI-DADE, FLORIDA

**SIGNING AND PAVEMENT
MARKING PLAN**

SHEET NO.
S-8